

# **OVERSIGHT OF INCENTIVE AUCTION IMPLEMENTATION**

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**HEARING**  
BEFORE THE  
SUBCOMMITTEE ON COMMUNICATIONS AND  
TECHNOLOGY  
OF THE  
COMMITTEE ON ENERGY AND  
COMMERCE  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED THIRTEENTH CONGRESS

**FIRST SESSION**

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**JULY 23, 2013**

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**Serial No. 113-74**



Printed for the use of the Committee on Energy and Commerce  
*energycommerce.house.gov*

U.S. GOVERNMENT PRINTING OFFICE  
86-398 WASHINGTON : 2014

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## **OVERSIGHT OF INCENTIVE AUCTION IMPLEMENTATION**

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**TUESDAY, JULY 23, 2013**

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY,  
COMMITTEE ON ENERGY AND COMMERCE,  
*Washington, DC.*

The subcommittee met, pursuant to call, at 10:34 a.m., in room 2322 of the Rayburn House Office Building, Hon. Greg Walden (chairman of the subcommittee) presiding.

Members present: Representatives Walden, Latta, Blackburn, Scalise, Lance, Guthrie, Kinzinger, Long, Ellmers, Eshoo, Doyle, Braley, Welch, Lujan, Dingell, and Waxman (ex officio).

Staff present: Ray Baum, Senior Policy Advisor/Director of Coalitions; Sean Bonyun, Communications Director; Matt Bravo, Professional Staff Member; Megan Capiak, Staff Assistant; Andy Duberstein, Deputy Press Secretary; Kelsey Guyelman, Counsel, Telecom; David Redl, Counsel, Telecom; Charlotte Savercool, Executive Assistant, Legislative Clerk; Shawn Chang, Democratic Senior Counsel; Patrick Donovan, Democratic FCC Detailer; Roger Sherman, Democratic Chief Counsel; and Kara Van Stralen, Democratic Policy Analyst.

### **OPENING STATEMENT OF HON. GREG WALDEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON**

Mr. WALDEN. I will call to order the Subcommittee on Communications and Technology, and welcome our witnesses for our hearing on “Oversight of the Incentive Auction Implementation.”

So the subcommittee meets today to continue our oversight of the FCC’s progress in implementing the incentive auction legislation that Congress passed last year. As you know, a successful broadcast incentive auction has the potential to bring significant revenue from the sale of the spectrum to bear on our Nation’s broadband spectrum crunch, unleash innovation for consumers, create hundreds of thousands of jobs for Americans, provide funding to begin the process of building out a nationwide interoperable public safety broadband network, and make significant contributions to reducing the Nation’s deficit.

But as with most things, the devil is in the details. We convened all five sitting FCC commissioners last December for a progress report on the implementation of the law. This was a first step in making sure that the Commission stays on track and acts within the confines of the law. In order to ensure that the FCC continues to follow the law, proper oversight is necessary.

A successful auction will require the FCC to get two parts of the equation correctly: the broadcast side and the broadband side. Now for broadcasters, the intent of the law could not be more clear. For those that plan to exit the market, the FCC has an obligation to let the market work. I am sure the Commission seems to be contemplating its judgment for that of the market when it comes to placing a value on a broadcast license. For the incentive auction to be successful, broadcasters that participate should be assured that they will be compensated based on the market value of their licenses as determined by the auction, not based on estimates by the FCC. The auction is voluntary, and we should askance at FCC policies that would dissuade participation.

Now for those who remain in the business of broadcasting, I have been equally clear what I believe is needed, and the statute is clear what they deserve is certainty. Broadcasters should be assured they will be able to remain viable following the auction. That means the Commission must provide the certainty that broadcasters in the border states will not be interfered with by our neighbors to the north and south. But beyond the statutory requirements, it means the FCC should take into consideration the unique challenges across the country as they reclaim broadcast spectrum and repack existing channels.

For example, although ineligible to participate in the auction, low-powered translators play a unique role in states in the mountain west. The Commission should consider the ongoing need for translators as they conduct the repacking analysis.

On the broadband side of the equation, the Commission should carefully consider how best to promote participation in the auction in a way that is consistent with the Communications Act.

Ultimately, a successful auction will be dependent on both broadcast and broadband interest. The FCC would be wise to recognize that in an industry as competitive as commercial wireless, rarely does the industry speak with a single voice. That is why I am encouraged that a large portion of the industry and broadcasters seems to be coalescing around a band plan that promotes competition and maximizes auction proceeds. So I would like to have seen the FCC focus on these aspects in their recent public notice on band plans.

Finally, I would like to talk for just a moment about the auction participation. Just like the broadcasters, potential broadband licensees should be courted as participants and not subjected to economic manipulations at the hands of the FCC. As we have learned time and again in spectrum auctions, well-meaning FCCs have tried to place conditions on auctions in an effort to engineer what it deemed a pro-competitive outcome. Recently, some have suggested the FCC can place restrictions on auction participation without any adverse effect on auction proceeds. It would be folly at best for the FCC to think that it could know better than the true market-based auction the maximum amount the auction could raise. Carefully crafted auction that recognizes the value of participation and has the humility to let the market decide the value of spectrum will best serve all the goals of the legislation.

So our witnesses today represent the many sides of this debate. Broadcasters that want to sell and broadcasters that want to

broadcast, two of our Nation's four largest wireless providers, a representative of the public interest community, and the Federal Communications Commission. While our witnesses may not see eye-to-eye on all the issues we will discuss, I look forward to your testimony—I have read it—and your counsel as we all work together on this. I know that we share a desire to see a successful broadcast incentive auction. I thank you all for being here today.

[The prepared statement of Mr. Walden follows:]

#### PREPARED STATEMENT OF HON. GREG WALDEN

The subcommittee meets today to continue our oversight of the FCC's progress in implementing the incentive auction legislation Congress passed last year. A successful broadcast incentive auction has the potential to bring significant spectrum to bear on our nation's broadband spectrum crunch, unleash innovation for consumers, create hundreds of thousands of jobs for Americans, provide funding to begin the process of building out a nationwide public safety broadband network, and make a significant contribution to reducing the deficit. But as with most things, the devil is in the details.

We convened all five sitting FCC commissioners last December for a "progress report" on the implementation of the law. This was a first step in making sure that the commission stays on track and acts within the confines of the law. In order to ensure that the FCC continues to follow the law, proper oversight is necessary.

A successful auction will require the FCC to get two parts of the equation right: the broadcast side and the broadband side.

For broadcasters, the intent of the law couldn't be more clear. For those that plan to exit the market, the FCC has an obligation to let the market work. I am concerned that the commission seems to be contemplating inserting its judgment for that of the market when it comes to placing a value on a broadcast license. For the incentive auction to be successful, broadcasters that participate should be assured that they will be compensated based on the market value of their licenses—as determined by the auction—not based on estimates by the FCC. The auction is voluntary and we should look askance at FCC policies that would dissuade participation.

For those that remain in the business of broadcasting, I have been equally clear what I believe is needed—and the statute is clear what they deserve—is certainty. Broadcasters should be assured that they will be able to remain viable following this auction. That means the commission must provide the certainty that broadcasters in the border states will not be interfered with by our neighbors to the north and south. But beyond the statutory requirements, it means the FCC should take into consideration the unique challenges across the country as they reclaim broadcast spectrum and repack existing channels. For example, although ineligible to participate in the auction, low-power translators play a unique role in states in the mountain west. The commission should consider the ongoing need for translators as they conduct their repacking analysis.

On the broadband side of the equation, the commission should carefully consider how best to promote participation in the auction in a way that is consistent with the Communications Act.

Ultimately, a successful auction will be dependent on both broadcast and broadband interest. The FCC would be wise to recognize that in an industry as competitive as commercial wireless, rarely does the industry speak with a single voice. That's why I am encouraged that a large portion of the industry—and broadcasters—seems to be coalescing around a band plan that promotes competition and maximizes auction proceeds. I would like to have seen the FCC focus on these aspects in their recent public notice on band plans.

Finally, I would like to talk for just a moment about auction participation. Just like the broadcasters, potential broadband licensees should be courted as participants not subjected to economic manipulation at the hands of the FCC. As we have learned time and again in spectrum auctions, well-meaning FCCs have tried to place conditions on auctions in an effort to engineer what it deems a "pro-competitive outcome." Recently, some have suggested that the FCC can place restrictions on auction participation without any adverse impact on auction proceeds. Let me be clear: it would be folly at best for the FCC to think that it could know better than a true market-based auction the maximum amount the auction could raise. A carefully crafted auction that recognizes the value of participation and has the humility to let the market decide the value of spectrum will best serve all of the goals of the legislation.

Our witnesses today represent the many sides of this debate. Broadcasters that want to sell and broadcasters that want to broadcast; two of our nation's four largest wireless providers; a representative of the public interest community; and, the Federal Communications Commission. While our witnesses may not see eye to eye on all of the issues we will discuss, I look forward to their testimony and counsel and know they share our desire to see a successful broadcast incentive auction.

# # #

Mr. WALDEN. I would yield the balance of my time to the vice chair of the subcommittee, Mr. Latta.

Mr. LATTA. Well thank you, Mr. Chairman, and thank you very much for holding this very important hearing today.

Spectrum has been a priority for this subcommittee over the past several years, and it is incumbent upon Congress to exercise oversight over the incentive auction. The Spectrum Act passed as part of the Middle Class Tax Relief and Job Creation Act in 2011 was landmark legislation with the authorization of the broadcast spectrum incentive auction. The success of this auction, which will be the most complicated the world has ever seen, is absolutely critical for bringing more spectrum to the market for mobile broadband as well as for funding our nationwide public safety broadband network.

There is no question that success hinges on the incentive auction's design. I look forward to hearing from each of our distinguished witnesses on the incentive auction implementation and the benefits or consequences of the certain auction designs. I look forward to the testimony, and as we continue this very critical dialogue.

And with that, Mr. Chairman, I yield back the remainder of my time.

Mr. WALDEN. Gentleman yields back his time. Chair now recognizes the gentlelady from California, Ms. Eshoo, the ranking member, for 5 minutes.

**OPENING STATEMENT OF HON. ANNA G. ESHOO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Ms. ESHOO. Thank you, Mr. Chairman. Good morning to all of my colleagues and to those that are testifying today.

As former FCC Chairman McDowell wisely stated last year, the upcoming voluntary incentive auction will "literally be the most complex spectrum auction in world history." To drive new investment, create jobs, and spark a new era of wireless broadband, we need to make sure this auction is done right the first time. We have to get this right.

We all know the storyline by now. Consumer demand for wireless broadband continues to skyrocket. More than half of all Americans now own a smartphone and as the number of wireless devices increases, so has data consumption. Last year alone, mobile devices in the U.S. downloaded more than 1.4 trillion megabits of data. That is nearly four times more demand than in 2010, and 2010 was not all that long ago.

As the FCC structures its auction rules and band plan to meet this growth, there are two areas that deserve enhanced attention.

First, with a rare opportunity to auction beachfront spectrum under 1 gigahertz, we must promote a competitive wireless landscape in which carriers of all sizes, both regional and national, have an opportunity to bid competitively for licensed spectrum. Today in the top 10 U.S. markets, the two largest wireless carriers control 86 percent of all beachfront spectrum below 1 gigahertz. As the Department of Justice observed earlier this year, an auction that protects and promotes a healthy, competitive wireless marketplace enhances consumer choice and serves the public good. Consistent with statute, the FCC should heed this advice by developing rules that promote competition and broad carrier participation.

Second, the FCC should structure a band plan that ensures a nationwide block of spectrum under 1 gigahertz dedicated for unlicensed innovation. The economic benefits of such an expansion are well-documented with recent studies concluding that the unlicensed wireless sector contributes between \$50 and \$100 billion per year to the U.S. economy. That is with a B. That is not million, that is billion.

Just this month, West Virginia University became the first university in the country to use TV white spaces to deliver wireless broadband service across the campus. Following on the successes of WiFi, Bluetooth, and RFID, the upcoming incentive auction can provide a unique opportunity to fuel a new generation of unlicensed technologies, supporting rural broadband, connected hospitals, smart grid networking, and so much more.

So I thank all of the witnesses that are here today to share your perspectives. I look forward to your testimony that will support our subcommittee's ongoing oversight.

Ms. ESHOO. I don't know—where is the clock? With that, I would like to yield the balance of my time to my colleague, Mr. Doyle.

Mr. DOYLE. I thank my friend.

This is a critical time for the future of competition in the wireless marketplace. Large carriers currently hold over 80 percent of the licenses for spectrum below 1 gigahertz. This spectrum provides the best in-building coverage, something that is crucial in urban areas, like many parts of my district in Pittsburgh.

The increasing disparity in carrier spectrum assets which the Department of Justice and the Commission have both recognized, presents significant risks such as slowing innovation, stifling price and service competition. If we are going to ensure more competitive mobile services marketplace, the Commission must ensure that all carriers have the opportunity to acquire high quality spectrum to meet the skyrocketing demand for mobile broadband services.

In the Spectrum Act we passed last year, we specifically preserved the Commission's authority to adopt and enforce rules concerning spectrum aggregation that promote competition. Holdings of lower band spectrum are already dangerously concentrated. I hope the FCC uses its authority to prevent further concentration in this upcoming incentive auction.

With that, I yield back my time and thank my colleague and friend, Ms. Eshoo.

Ms. ESHOO. Mr. Chairman, may I just submit something for the record? This is a letter from a broad coalition of Fortune 100 companies, rural wireless carriers, and small businesses who believe

every wireless carrier should have a fair opportunity to compete in the upcoming auction.

Mr. WALDEN. Without objection.

[The information appears at the conclusion of the hearing.]

Ms. ESHOO. Thank you.

Mr. WALDEN. Gentlelady yields back her time. Turn now to the vice chair of the full committee, Ms. Blackburn, from Tennessee, for 5 minutes.

**OPENING STATEMENT OF HON. MARSHA BLACKBURN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TENNESSEE**

Mrs. BLACKBURN. Thank you, Mr. Chairman, and I want to thank each of you for being here. I have to tell you, we all have questions and we are looking forward to having your feedback today as we look at what we think is a pretty important issue, and that is the spectrum auctions. There are questions that are unanswered regarding both the policy and the process. We are hoping that we can clear up some of those. We think the law is clear and if we follow the law, then we are going to have a successful auction. And if we don't, then I think that we are pretty much guaranteed to fail.

It is important for us to keep in mind also that going through the spectrum auction process, this is not a science fair project, and we want to make certain that we do our due diligence. This is going to be a complicated process and it doesn't mean the FCC should exclude participants in order to show favoritism to certain telecommunication competitors. Gerrymandering the auctions, particularly the below 1 gigahertz level, to give regulatory favor to some competitors at the expense of those who have earned their success puts all of the work that we have done up to this point at risk. It violates the law and it also threatens our ability to stand up the public safety network, to provide revenue for deficit reduction, and to find a repacking solution.

So we are going to have a lot of questions for you today. Again, I thank you all for being here, and we look forward to proceeding in an orderly manner.

And I yield back—I will yield time to Mr. Long, Ms. Ellmers, whomever is—

Mr. WALDEN. If either of you seek time? If not—

Mrs. BLACKBURN. If no one is seeking time, I will yield back.

Mr. WALDEN. Yield back. Chair now recognizes former chairman of the committee, the gentleman from California, Mr. Waxman, for 5 minutes.

**OPENING STATEMENT OF HON. HENRY A. WAXMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Mr. WAXMAN. Thank you, Mr. Chairman.

Today we continue our oversight of the FCC's implementation of the public safety inspector MACT that Congress passed last year with strong bipartisan support, and I want to thank Chairman Walden for working with us to assemble an outstanding panel of witnesses. We are delighted to have you all here.

We will hear divergent views today on how the auction should be implemented, but equally strong, we will hear agreement that we have a need to make this groundbreaking auction a success.

When Congress enacted this landmark legislation, we knew that implementation would be challenging. The FCC quickly retained a group of world class experts to help design the complex spectrum auction, and the FCC staff immediately started working around the clock to get this right. I want to thank the dozens of FCC staffers who have worked so hard to address the challenges posed by this auction.

In my view, the success of the auction will be measured by how well we meet the goals laid out by the law. Congress enacted the law with multiple goals in mind: to help relieve the spectrum crunch, and to meet the exploding demand of wireless data, to raise revenue, to fund multiple public priorities, including the creation of the broadband network for first responders, or FirstNet, to promote competition in the wireless marketplace, and to spur continued innovation such as the creation of new super Wi-Fi services. The law we passed reflects all of these goals. To promote competition, the law expressly preserves the ability of the FCC to establish limits on spectrum aggregation where necessary to ensure competition. To promote innovation, the law called for the establishment of a nationwide guard bands that can be used for unlicensed use.

Not surprisingly, some parties are now engaged in revisionist history, suggesting that the FCC has less authority than the statute provides. Others are trying to erect straw men, arguing that proponents of a competitive auction want to exclude AT&T, In-spect, and Verizon from bidding. No party that I am aware of is urging the FCC to exclude the biggest wireless companies from participating in the auction. In fact, my own view is that both companies should be able to compete in the auction. But it makes no sense to allow the two biggest companies with an already dominant market position to acquire all of this high quality beachfront spectrum. The Justice Department wrote the FCC earlier this year to emphasize how important it is for competition and consumers that this low band spectrum not be dominated by the two big carriers. This expert views from the antitrust division deserve careful consideration.

Others have challenged the creation of guard bands, but guard bands are important to enhance the value of the spectrum being auctioned, and to create spectrum that can be used for the next generation of Wi-Fi services. The FCC's job will not be easy, but the goals of the statute are the right ones and they are all achievable. With carefully designed rules, the FCC can make new spectrum available to wireless carriers, raise the revenue needed for FirstNet, and promote competition and innovation. Our job should be to resist the importuning of special interests and help the FCC make this groundbreaking auction an historic success.

I look forward to the testimony of our distinguished witnesses, and I would like to ask unanimous consent to put two documents into the record. One is a letter from public interest groups, Public Knowledge, The New America Foundation, the National Hispanic Media Coalition, Free Press of the Writers Guild of America, in

support of pro-consumer limitations on spectrum concentration as part of the auction of the 600 megahertz band by the FCC.

Mr. WALDEN. Without objection.

[The information appears at the conclusion of the hearing.]

Mr. WAXMAN. And the second is to enter into the record an ex parte by the U.S. Department of Justice concluding that the rules for the 600 megahertz auctions are necessary to ensure competition in the wireless market.

Mr. WALDEN. Without objection.

[The information appears at the conclusion of the hearing.]

Mr. WAXMAN. Thank you, Mr. Chairman. I yield back the balance of my time.

Mr. WALDEN. Gentleman yields back the balance of his time. Now we will turn to our distinguished panel of witnesses who have agreed to provide us with great testimony and counsel today. We appreciate you all being here.

We will start with Gary Epstein, who is the Senior Advisor and Co-Lead of the Incentive Auction Task Force, the Federal Communications Commission, the man who has the biggest weight on his shoulder to do it all, and do it all right, make it all work. Mr. Epstein, thanks for the work you are doing for the country at the FCC. We look forward to your comments today, sir.

**STATEMENTS OF GARY EPSTEIN, SENIOR ADVISOR AND CO-LEAD, INCENTIVE AUCTION TASK FORCE, FEDERAL COMMUNICATIONS COMMISSION; HAROLD FELD, SENIOR VICE PRESIDENT, PUBLIC KNOWLEDGE; RICK KAPLAN, EXECUTIVE VICE PRESIDENT, STRATEGIC PLANNING, NATIONAL ASSOCIATION OF BROADCASTERS; PRESTON PADDEN, EXECUTIVE DIRECTOR, EXPANDING OPPORTUNITIES FOR BROADCASTERS COALITION; KATHLEEN HAM, VICE PRESIDENT, FEDERAL REGULATORY AFFAIRS, T-MOBILE; AND JOAN MARSH, VICE PRESIDENT, FEDERAL REGULATORY, AT&T**

**STATEMENT OF GARY EPSTEIN**

Mr. EPSTEIN. Thank you very much. Good morning, Chairman Walden and Ranking Member Eshoo, and members of the subcommittee. My name is Gary Epstein. I am the Senior Advisor and Chair of the Federal Communications Commission Incentive Auction Task Force. Thank you for the opportunity to discuss the Commission's efforts to carry out Congress' statutory direction in designing and implementing the broadcast television spectrum incentive auction.

In our effort to design and implement the incentive auction, the Commission is guided by four primary public interest objectives. One, relieving the spectrum crunch by creating a market-based process for repurposing the maximum amount of UHF spectrum for licensed and unlicensed flexible use to address the expected growth in mobile data usage, which is predicted to grow by a factor of nine by 2017. Two, fulfilling our statutory obligations and congressional objectives that include reimbursing repack broadcasters, funding FirstNet, and deficit reduction. Three, providing a unique financial opportunity for participating broadcasters while preserving our

healthy broadcast services for those who choose not to contribute their spectrum. And four, promoting the innovation in a vibrant mobile market.

As we pursue these objectives, we are focused on both the engineering and economics issues, and are drawing on the expertise of the world's leading economists, auction design experts, and engineers, both inside and outside the agency. We are engaging with all interested parties in an open and transparent process in which we will learn from the robust public record we are building, aim for simplicity, and adjust our proposals as necessary to ensure that the auction succeeds.

With respect to process, it is also important to remember that we are in the middle of an open proceeding and the Commission has made no final determinations. The staff's role in the incentive auction proceeding, under the direction of the Commission, is to conduct as comprehensive and exhaustive an examination of the full range of policy options as practicable in order to best advise the Commission. Ultimately, within the bounds of the statute, it is the Commission that will determine the design of the incentive auction.

The Commission has moved swiftly since Congress passed the Spectrum Act. A guiding principle has been to "get it done on time and to get it done right." Under Acting Chairwoman Clyburn, the staff has continued our steady progress toward a 2013 report and order and a 2014 auction.

In the first 6 months after the Act was passed, the Commission quickly formed a cross-agency task force, retained auction design experts, adopted a channel sharing order, and officially launched the proceeding by adopting a comprehensive and specific notice of proposed rulemaking.

Since adopting the Notice, we have hosted several workshops and participated in numerous industry conferences, both to inform the public about the proceeding and solicit input on distinct incentive auction issues. To date we have had workshops on channel sharing, reimbursement for relocation costs, auction design, the band plan, and the Notice itself.

In addition, in the interests of public engagement and an open, transparent and participatory process, the Commissioners and staff have participated in over 180 incentive auction-related events and meetings since the enactment of the Spectrum Act, including numerous discussions with our colleagues in Canada and Mexico. Perhaps unsurprisingly, the Task Force has met with each of my fellow panelists numerous times to discuss their particular views with respect to the auction.

Since the Notice, we have also released several public notices on issues we believe warranted further consideration and opportunity for interested parties to provide additional input. To date, we have received and considered over 460 comments and reply comments to incentive auction public notices. Our public notices have solicited input on interference calculation software, band plan design, and in the case of a public notice we released just yesterday, the repacking process. Yesterday's release includes the results of a preliminary analysis of whether any particular television station could be assigned or reassigned to particular channels in the incentive auction repacking process, consistent with statutory and other re-

quirements. Each public notice we have issued has proven critical to advancing the proceeding, and we expect that yesterday's release, which was only the first of several public notices we expect to issue regarding repacking, will allow interested parties to better understand some of our preliminary efforts in developing a repacking methodology and elicit valuable comments on our proposals.

Finally, we are committed to an open, transparent, and inclusive process. On several issues it appears there is emerging some agreement on how to move forward. On other issues, stakeholders appear to be coming to general agreement on the surface, but there remain important differences of opinion in the details. And on some important topics there remain divergent positions. The key for the Commission is to continue to solicit and carefully review ideas from the experts, both outside and within the Commission, to enable the Commission to make the hard decisions based on the best available data and ideas. The Incentive Auction Task Force will make recommendations to the full Commission that we believe will result in an auction that will serve the public interest and achieve the objectives and goals Congress laid out in the Spectrum Act. The ideas we put forth for the Commissioners to consider will be based on substantial and valuable input from the public.

Thank you and I look forward to your questions.

[The prepared statement of Mr. Epstein follows:]

**Statement of Gary Epstein  
Senior Advisor and Chair  
Incentive Auction Task Force  
Federal Communications Commission**

**Before the  
Subcommittee on Communications and Technology  
Committee on Energy and Commerce  
U.S. House of Representatives**

**Hearing on “Oversight of Incentive Auction Implementation”**

**July 23, 2013**

Good morning, Chairman Walden, Ranking Member Eshoo, and members of the Subcommittee. My name is Gary Epstein and I am the Senior Advisor and Chair of the Federal Communications Commission’s Incentive Auction Task Force. Thank you for the opportunity to discuss the Commission’s efforts to carry out Congress’s statutory direction in designing and implementing the Broadcast Television Spectrum Incentive Auction.

In our effort to design and implement the incentive auction, the Commission is guided by four primary public interest objectives:

- One, relieving the spectrum crunch by creating a market-based process for repurposing the maximum amount of UHF spectrum for licensed and unlicensed flexible use to address the expected growth in mobile data usage, which is predicted to grow by a factor of nine by 2017.
- Two, fulfilling our statutory obligations and Congressional objectives that include reimbursing repacked broadcasters, funding FirstNet, and deficit reduction.
- Three, providing a unique financial opportunity for participating broadcasters while preserving a healthy broadcast service for those who do not contribute their spectrum.
- And four, promoting innovation and a vibrant mobile market.

As we pursue these objectives, we are focused on both engineering and economics issues and are drawing on the expertise of the world’s leading economists, auction design experts, and engineers, both inside and outside the agency.

We are engaging with all interested parties in an open and transparent process in which we will learn from the robust public record we are building, aim for simplicity, and adjust our proposals as necessary to ensure the auction succeeds.

With respect to process, it is also important to remember that we are in the middle of an open proceeding and the Commission has made no final determinations. The staff's role in the incentive auction proceeding, under the direction of the Commission, is to conduct as comprehensive and exhaustive an examination of the full range of policy options as practicable in order to best advise the Commission. Ultimately, within the bounds of the statute, it is the Commission that will determine the design of the incentive auction.

The Commission has moved swiftly since Congress passed the Spectrum Act. A guiding principle has been to "get it done on time and to get it done right." Under Acting Chairwoman Clyburn, the staff has continued our steady progress toward a 2013 report and order and 2014 auction.

In the first six months after the Act was passed, the Commission quickly formed a cross-agency task force, hired auction design experts, adopted a channel sharing order, and officially launched the proceeding by adopting a notice of proposed rulemaking (Notice).

Since adopting the Notice, we have hosted several workshops and participated in numerous industry conferences, both to inform the public about the proceeding and solicit input on distinct incentive auction issues. To date we have had workshops on channel sharing, reimbursement for relocation costs, auction design, the band plan, and the Notice itself.

In addition, in the interests of public engagement and an open, transparent and participatory process, the Commissioners and staff have participated in over **180** Incentive Auction-related events and meetings since the enactment of the Spectrum Act, including numerous discussions with our counterparts in Canada and Mexico. Perhaps unsurprisingly, the Task Force has met with each of my fellow panelists numerous times to discuss their particular views with respect to the auction.

Since the Notice, we have also released several public notices on issues that we believe warranted further consideration and opportunity for interested parties to provide additional input, including the 600 MHz band plan and interference calculation software; to date, we have received and considered over **460** comments and reply comments to incentive auction public notices. Each public notice that we have issued has proven critical to advancing the proceeding.

Finally, we are committed to an open, transparent, and inclusive process. On several issues it appears that there is emerging some agreement on how to move forward. On other issues, stakeholders appear to be coming to a general agreement on the surface, but there remain important differences of opinion in the details. And for some important topics there remain divergent positions. The key for the Commission is to continue to solicit and carefully review ideas from the experts from outside and within the Commission to enable the Commission to make the hard decisions based on the best available data and ideas. The Incentive Auction Task Force will make recommendations

to the full Commission that we believe will result in an auction that will serve the public interest and achieve the objectives Congress laid out in the Spectrum Act. The ideas we put forth for the Commissioners to consider will be based on substantial and valuable input from the public.

Thank you and I look forward to your questions.

Mr. WALDEN. Mr. Epstein, thank you, and again, thank you for what you and your team are doing to try and get this right and get it done on time. So we appreciate that.

Mr. EPSTEIN. Thank you, Mr. Chairman.

Mr. WALDEN. We are going to go now to the Senior Vice President of Public Knowledge, Mr. Harold Feld. We appreciate your being back before our subcommittee to testify, and we look forward to your comments.

#### **STATEMENT OF HAROLD FELD**

Mr. FELD. Thank you very much, Chairman Walden, Ranking Member Eshoo. Thank you for inviting me here to testify today.

Two years ago, I testified before this subcommittee that a properly structured incentive auction could be a rare public policy trifecta, a win-win-win that provided more licensed spectrum, more efficient access to unlicensed spectrum in this extremely useful set of frequencies. In addition to raising revenue for an interoperable public safety network, now called FirstNet, the auction of licenses in this band for mobile broadband could also enhance competition to the benefit of consumers.

At the same time, while reallocation of a portion of the TV band from broadcasting to licensed wireless service would mean the loss of spectrum for white spaces in some areas that raise the possibility of creating more access in crowded urban markets. Through the reallocation of the spectrum and subsequent repacking of the remaining broadcasters, the FCC could create a national unlicensed band that would encourage developers to build new devices and offer more innovative services that take advantage of the unique properties of these frequencies.

The last 2 years have proved both the importance of unlicensed access, especially in the TV bands, and the importance of stimulating competition on the licensed side. In this time period, we have seen the cable industry recognize the value of offering unlicensed access as a supplement for their broadband networks. Ad hoc unlicensed networks proved their value in the aftermath of Superstorm Sandy. We now talk of carrier grade Wi-Fi as a critical tool for the wireless industry. Wireless ISPs are using unlicensed spectrum, including TV white spaces, to bring affordable broadband to rural America.

We have also seen the value of regulatory steps to promote competition. In 2011, the FCC imposed data roaming rules, and with the Department of Justice, jointly blocked the effort of AT&T to acquire T-Mobile. In 2012, they pushed Verizon to divest spectrum to competitors as part of its acquisition of spectrum co-licenses. As a result, we have seen more investment in the wireless market in the last year than we had for many years before. Billions of dollars of new investment float into the market as both T-Mobile and Sprint attracted new interest. These revitalized competitors have offered new equipment plans and service plans, and in response, AT&T and Verizon have redoubled their efforts to deploy 4G LTE networks as rapidly as possible and respond with their own new pricing plans. In short, competition works and needs to be preserved.

All of this highlights the importance of getting rules for this incentive auction right. The Department of Justice has identified access to low band spectrum as critical for competition. This spectrum is highly valued for its propagation qualities, its ability to travel long distances and penetrate buildings and trees. Companies looking to invest in unlicensed, such as Comcast, Google, and Microsoft have likewise identified the broadcast band as critical for developing the next generation of unlicensed services.

What does getting it right mean? First, it means we must stop creating false choices and pushing the FCC to choose sides. Congress passed a compromised bill that gave the FCC the authority to use the auction to enhance unlicensed and promote competition, but within limits. We should collectively embrace this compromise rather than refighting old battles. The priorities of this auction must work together, not push against each other and fly apart.

Second, we need to respect the FCC staff as they work through this difficult process. We cannot have the transparency and trust we need if people unhappy with the substantive choices browbeat them over procedure. We should recognize that well-structured guard bands will both provide adequate spectrum for unlicensed use and increase the value of the service as a whole. This is not about artificially inflating guard bands to the point where it would undermine the license service; this is about being mindful to achieve all our goals. Instead of setting this up as a false choice where every megahertz of guard band is seen as lost revenue, we should recognize that well-structured guard bands will serve the interest of licensed and unlicensed users alike.

Finally, we need to make sure that we have enough participation in the auction to make it worth holding. The best way to ensure that enough bidders to show up is what we call a “No Piggies Rule.” Don’t ban anyone from the auction, but limit the number of licenses that any one company can win. Opponents of a No Piggies Rule argue that we need to have AT&T and Verizon in the auction. That is true, but the beauty of the No Piggies Rule is it lets AT&T and Verizon participate; it just makes sure there are enough licenses to make it worthwhile for competitors to show up as well. An auction with only AT&T and Verizon will be just as much a failure as an auction that banned AT&T and Verizon.

To conclude, the key to a successful incentive auction is a balanced approach. We get there by continuing our current deliberative process. We can still achieve a public policy trifecta, a win-win-win for mobile broadband competition and unlicensed access and build an interoperable public safety net that we all need. It would be a shame to miss this chance by fighting old battles instead of working together.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. Feld follows:]



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Good morning Chairman Walden, Ranking Member Eshoo, and members of the subcommittee. I am Harold Feld, Senior Vice President at Public Knowledge, a public interest nonprofit dedicated to the openness of the Internet and open access for consumers to lawful content and innovative technology. I am pleased to have the opportunity to appear before you once again to discuss the implementation of the FCC’s first ever spectrum incentive auction.

#### **Executive Summary**

A bit more than 2 years ago, I testified before this Subcommittee about what was then a proposal to consider giving the FCC authority to conduct incentive auctions. As I said at the time, the incentive auctions provide a rare case for a ‘win-win-win’ in public policy. Done thoughtfully, the incentive auction could provide new low-band spectrum licenses for wireless carriers to meet expanding demand and enhance competition and provide revenue to pay for a national wireless network for first responders, while enhancing the efficiency of the unlicensed TV white spaces service and preserving free over-the-air television.

I still believe we can do this. But we cannot succeed if we rush heedlessly forward out of impatience to hold an auction however ill-designed. Nor will we achieve this by forcing false

choices between licensed and unlicensed spectrum, or between enhancing competition and paying for FirstNet. To the contrary, efforts to follow what seems like the straightforward path to maximizing revenue by minimizing guard bands or refusing to adopt rational spectrum aggregation limits are likely to make this auction a failure rather than a success.

Perhaps most importantly, we must give the FCC staff time to develop a proper record and to do their jobs. Constantly hectoring staff that they are moving too fast or too slow, issuing too many public notices or not enough, being too generous to broadcasters or not generous enough, scheming to undermine licensed spectrum with inflated guard bands or being in the pocket of this or that faction of the industry is worse than not helpful. It creates an atmosphere of suspicion and pushes staff to retreat into the bowels of the Portals at a time when we need the maximum amount of transparency and trust between staff and stakeholders.

### **Background**

Congress' inclusion of Title VI in the Middle Class Tax Relief and Job Creation Act of 2012 was a groundbreaking and critical step forward for U.S. communications policy and the advancement of new and innovative technology in the 21<sup>st</sup> century. It was groundbreaking because of the creation of the FCC's authority to create and execute a two-sided incentive auction for the first time in history. This mechanism for fairly repurposing spectrum that is already allocated uses market based principles to encourage more efficient use of this valuable public resource and make room on the spectrum allocation for new uses and technologies to develop. The legislation was a critical step because it opened up spectrum to allow for greater growth and competition in the licensed wireless broadband market, while preserving a

commitment to unlicensed spectrum to be used for new innovative services, some of which may not even have been invented yet. The legislation also balance the priorities of repurposing spectrum for new uses with the goals of funding an interoperable public safety wireless network in accordance with the recommendations of the 9/11 Commission.

I continue to believe that all these goals remain possible. Certainly it takes patience and a well developed record to find the way to balance these competing goals. I commend the FCC for working so diligently to get the numerous details right so that all these working parts will mesh together, rather than fly apart.

Conversely, I find it very unfortunate that some continue to try to create artificial choices among the goals Congress created. We are well aware that the final language of the Act represented a compromise between Members and stakeholders with very strongly held opinions on the appropriate policy to follow. Rather than refight these battles again and again, we should embrace the compromise. Rules that ignore the compromise struck by Congress, pretending that one faction triumphed over the other when it did not, do more than violate the language of law. Such efforts threaten to unbalance the complex machinery Congress dictated for running the auction, potentially dooming all these efforts.

#### **Allow the FCC to do its job**

Perhaps most importantly, Congress should remember that every economist that testified on incentive auctions – regardless of political affiliation – urged that the FCC must have maximum discretion to design and run the auction. Certainly Congress must maintain oversight.

But Members should also recognize both the tremendous skill and experience the FCC has brought to bear on this complex problem and the FCC's history of success since Congress authorized spectrum auctions 20 years ago. It is entirely appropriate to require the FCC to explain its choices. It is counter-productive to tell the FCC before it even makes choices that it has chosen wrong.

Since passage of the Act, the FCC has moved quickly to design this first-ever incentive auction to reflect the several goals of the legislation and with the input of all critical stakeholders. In order for the incentive auction to be successful two things are necessary. First, all stakeholders and FCC staff need to work in a transparent, participatory way to determine the various aspects of auction design, band plan options, and repacking processes. Second, the FCC must enact rules that respect and balance the various goals of the legislation rather than bowing to pressure from one interest in favor of another.

Most importantly for those following from outside, the structure created by Congress depends on maximizing the difference between what it has to pay broadcasters and what it can persuade wireless carriers to pay. If the FCC recovers 120 MHz of spectrum, but ends up giving 90% of the proceeds to broadcasters to facilitate recovering that much spectrum, the auction cannot pay for FirstNet. By contrast, an auction that recovered somewhat less spectrum, but where the Federal government kept much more of the revenue, would potentially produce far more revenue for the government. As a result, the FCC must strike a balance between providing real incentive to broadcasters to return some or all of their spectrum use rights – particularly in

constrained markets – while not proving so generous that the government fails to meet its revenue goals.

This means that, invariably, some stakeholders will not get the rules they want. Furthermore, because the interest of the federal government is somewhat at odds with the interest of both wireless carriers (who would prefer to acquire licenses as cheaply as possible) and broadcasters (who would prefer to sell for the highest value possible), any so-called “industry consensus” requires very careful examination.

Finally, even where consensus on major issues emerges, the details matter – more than usual. To say there is a “consensus” for a particular approach can be misleading if the consensus runs one-molecule deep and then splinters into different positions.

#### **Unjustified and Counter-Productive Browbeating**

In May, the FCC’s Wireless Bureau released a fairly routine Public Notice on alternatives to the incentive auction band plan. The Public Notice acknowledged up front that nearly all wireless carriers and broadcasters had opposed the initial “down from 51/down from 37” proposal in the Notice of Proposed Rulemaking (NPRM). The public notice therefore sought to explore possible variations in a pure “down from 51” either proposed in the record or suggested by staff based on the record and the public band plan workshop.

This form of public sorting out of the technical details of a first-of-its-kind auction proceeding is to be expected by the expert agency for spectrum management. It was transparent,

and yet it was a reaction to previous concerns about plans that had been raised by commenters in the record and at a band plan workshop a few weeks prior.

The reaction by some to this routine Public Notice was disappointing and unproductive, especially in such a challenging proceeding. Several mobile companies criticized FCC staff for not favoring the plan that they preferred instead of searching for consensus. Oddly, Commissioner Pai issued his own statement blasting the Wireless Bureau for not recognizing what he believed to be the consensus band plan, even claiming that staff had exceeded their authority. However, the record will show that many consumer groups, competitive mobile companies, and tech companies have shown that the perspective of large incumbent mobile providers are not the only view to be considered.

It is one thing to disagree on substance, but it is another to browbeat staff for conducting an open and transparent process. An incentive auction designed by large incumbent mobile companies alone would be a disaster. Consumers and other stakeholders rely on an independent FCC staff to conduct transparent processes. Public political pressure by Commissioners and others, based on FCC staff efforts to simply do the job the American people expect of them, only serves to intimidate future efforts to include all opinions in the proceeding and could potentially harm the creation of balanced rules for the incentive auction that serves all the goals of the statute.

Recently, some stakeholders (including some that complained about release of the May Public Notice) have complained that staff should release further details with regard to auction

details such as repacking methodology and auction rules. It is simply not fair to berate FCC staff for having the temerity to release a Public Notice, to go so far as to accuse the staff of exceeding their delegated authority by issuing the Public Notice, then ask, “Why aren’t you issuing more public notices.” That this Committee has recently considered a bill to further constrain the ability of staff to act on delegated authority likewise sends a clear message to staff that the safest course is to do nothing.

Browbeating of staff over process, in a rather obvious effort to try to drive how staff considers substance, does a disservice to the hardworking staff at the Commission and undermines any hope of developing the incentive auction rules in an open and transparent way. If we want to see more Public Notices that help develop the record and focus stakeholders on the remaining critical issue, parties cannot respond to transparency with hostility.

#### **Balanced Goals**

Returning to substance over process, we must likewise remain focused on the statute as written. Since the Middle Class Tax Relief Act was passed, many folks have worked to reframe the goals of the law. The statute however is clear and provides for a variety of goals and outcomes that if implemented well, should all be attainable.

As an initial matter, the Middle Class Tax Relief Act preserved existing FCC authority both generally, and specifically with regard to implementation of the TV “white spaces” service, unless explicitly altered by statute.<sup>1</sup> The statute did nothing to alter the overall goals of the

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<sup>1</sup> §6403(i)

FCC's auction authority to promote the public interest by adopting rules that encourage innovation<sup>2</sup> and that "avoid[] excessive concentration of licenses."<sup>3</sup> Congress also retained the prohibition on consideration of auction revenue as a public interest benefit.<sup>4</sup>

Congress did make several specific alterations with regard to both unlicensed operation in spectrum recovered from broadcasters and with regard to limits on participation in the incentive auction. These explicit provisions provide the outlines of the balanced path the FCC must follow to actualize the goals Congress included in the Middle Class Tax Relief Act provisions on spectrum.

#### **Nurturing Continued Innovation In Unlicensed**

As members of Congress and FCC Commissioners across the political spectrum have repeatedly stated, unlicensed spectrum remains one of our great spectrum innovations. The United States became the first country in the world to authorize flexible access to spectrum through a simple certification mechanism that dramatically lowered barriers to entry and innovation. Simply try to imagine a world today without such everyday devices such as garage door openers or free Wi-Fi in public buildings, from coffee shops to the halls of Congress. Bluetooth technology which operates over unlicensed spectrum has made phone conversations in

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<sup>2</sup> 47 U.S.C. §309(j)(3)(A).

<sup>3</sup> 47 U.S.C. §309(j)(3)(B).

<sup>4</sup> 47 U.S.C. §309(j)(7)(B). By implication, Congress clearly intended that the combination of revenue from the incentive auction and the additional auctions required by Section 6401, but there is a considerable difference between an expectation expressed in the statute that a combination of spectrum auctions would raise \$7 billion to cover FirstNet's construction costs and a command to maximize auction revenue for the incentive auction in direct violation of 47 U.S.C. §309(j)(7)(B).

cars safer with hands free technology, and the automobile industry is already testing the use of unlicensed spectrum to move the idea of auto piloted cars from science fiction to reality.

In particular, authorization to use TV white spaces (TVWS) under Republican FCC Chairman Kevin Martin, and subsequent modifications under Democratic Chairman Julius Genachowski, have opened the door to a dramatic advances in hared spectrum technology. Just this month, West Virginia University announced that it would utilize TVWS to provide wireless broadband for its entire campus and surrounding neighborhoods, including free Wi-Fi on public transit. In Cape Town, South Africa Google is piloting wireless broadband connectivity using TVWS to rural areas that lack electricity using solar powered devices. With the large reserve of TVWS in rural areas of the U.S., many communities will look to TVWS networks as a possible solution to the economic challenge of rural broadband deployment. It is too early to know if this will succeed, but initial projects on college campuses through Air U. and in small cities like Wilmington, NC will help answer these questions over the coming years.

Congress knew that the incentive auction could either enhance the efficiency of TVWS and encourage new investment, or wipe out this promising new technology altogether. Congress opted for the first course, instructing the FCC to structure the incentive auction in a way that compensated for the loss of spectrum in some markets by creating the potential for meaningful use in all markets through unlicensed in the 600 MHz guard bands.

The final version of the Act rejected both the initial House approach of restricting TVWS use solely to the surviving broadcast bands, and the Senate approach of authorizing a direct

allocation for exclusive unlicensed use if the FCC recovered more than 84 MHz of spectrum from broadcasters. The compromise version explicitly preserved the use of the remaining broadcast service for TVWS, while permitting the FCC to authorize unlicensed use in the 600 MHz guard bands.<sup>5</sup> At the same time, the use of unlicensed spectrum should not undermine licensed use of the 600 MHz band either by causing harmful interference<sup>6</sup> or by inflating the guard bands beyond what is “technically reasonable.”<sup>7</sup>

This compromise illustrates the necessary balance the Commission should adopt. Congress clearly intended to foster the further development of unlicensed technology and TVWS in particular. The FCC may consider how to facilitate this development through the use of guard bands, and may certainly take the impact of its decisions on the development of the TVWS into account. At the same time, consideration for unlicensed use alone cannot drive the Commission’s decision making.

In short, according to the Middle Class Tax Relief Act, unlicensed remains an important part of the wireless ecosystem. But it is only one part. The size of guard bands can – and should – reflect, among other things, a desire to ensure sufficient national access to unlicensed spectrum to encourage investment and deployment in urban markets as well as rural markets. At the same

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<sup>5</sup> See §§6403(i); 6407.

<sup>6</sup> §6407(e).

<sup>7</sup> §6407(b). By adopting this language, Congress explicitly rejected the alternative – and more restrictive – language that guard bands be no bigger than ‘technically necessary.’ The word ‘reasonable’ denotes discretion (albeit bounded discretion), especially when combined with the Commission’s responsibility (unaltered by the statute) to encourage innovation and flexibility. See, 47 U.S.C. §§303(g); 309(j)(3)(A).

time, concerns over unlicensed use cannot so dominate the Commission's thinking that they actively undermine the viability of licensed services.

It is in this context that I am particularly pleased to see recent statements by Commissioner Pai that the Act clearly authorizes use of unlicensed in the guard bands, and that we should focus on how to do so without causing harmful interference to licensed services. The best way to focus on this question would be for staff to hold a workshop and issue a Public Notice specifically on this question.<sup>8</sup>

Until details can be filled in, Public Knowledge continues to support calls from a broad range of stakeholders such as Comcast, Broadcom, The Wireless ISP Association (WISPA), and Google -- along with public interest organizations such as Free Press, Consumer Federation of America, and the New America Foundation -- to create a 20 MHz contiguous block of spectrum for unlicensed in the "duplex gap" between the uplink and downlink paired spectrum. Based on previous experience with duplex gaps, and in light of the propagation characteristics of the 600 MHz spectrum, this size would represent the optimum trade-off for licensed services to build inexpensive handsets that minimize internal filters and potential self-interference while providing adequate spectrum on a national basis for broadband in both urban and rural settings.

Critically, the 20 MHz duplex gap is not the only way to provide adequate unlicensed spectrum to meet urban and rural needs. This is why a further public notice is imperative.

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<sup>8</sup> Staff previously committed to holding a workshop on this issue at the band plan workshop on May 3, 2013.

**The Myth of “Inflated” Guard bands**

Opponents of unlicensed use have repeatedly stated that the law prohibits the use of unlicensed in the guard bands. Some have even gone so far as to argue that the law prohibits guard bands entirely, or requires the FCC to confine them to some arbitrary minimum. As noted above, this ludicrous claim violates the plain language of the statute, which not only explicitly preserves FCC authority to create band plans with guard bands but which rejected the more restrictive “technically necessary” for the more flexible “technically reasonable.”

The alternative argument of opponents of unlicensed use is the effort to create a false choice between guard bands and auction revenue. This ignores that well managed guard bands enhance the value of licensed portions of the spectrum by lowering the cost of equipment design. Similarly, the increasing synergistic use between licensed and unlicensed spectrum, notably in the development of “Wi-Fi offload” and “carrier grade Wi-Fi,” show how permitting Wi-Fi in the guard bands would actually enhance value and thus *increase* auction revenue.

To illustrate this point, consider the following analogy. The development firm of Henry and Anna decide to develop some prime real estate for residential use. They build houses with lawns and driveways so that people can invite guests and hold parties while protecting the neighbors from each other’s noise. They leave some open common space for playgrounds and to enhance the feeling of community. They use some land for green space to set the houses back from the main road. They end up building 20 houses.

Fred and Greg, rival developers who hold a similar plot of land, can't believe how much money they think Henry and Anna are leaving on the table with all this "wasted" space. They build townhouses jammed up as close to each other as possible, with the bare minimum number of parking spaces. By leaving no common space or open area, they cram in 30 houses.

But a funny thing happens. Henry and Anna can sell their houses for \$500,000 a house, because they have all this space and it makes a very nice community. Fred and Greg can only get \$150,000 for their houses, because no one wants to pay as much for houses jammed on top of each other, with everyone hearing their neighbor's business, no place for friends or relatives to park when they visit, and houses flush against the street.

At the end of the day, Henry and Anna make \$10,000,000, while Fred and Greg make only \$4,500,000. Despite all the wasted "green space," Henry and Anna end up making \$5,500,000 more than Fred and Greg.

The same logic holds true with guard bands. Maximizing the number of MHz auctioned by having licenses piled one on top of the next with no guard bands does not mean more revenue from the auction any more than maximizing the number of houses in a development automatically means more money for the developer.

#### **Competition: Spectrum Aggregation/Band Plan**

Perhaps the most important goal to consumers in the construction of a balanced incentive auction implementation is the assurance that the rules will promote competition in the mobile

broadband industry. Following the dominance of the 700 MHz Auction in 2008 by AT&T and Verizon, it became conventional wisdom that the overwhelming advantage of AT&T and Verizon in low-band spectrum meant a long, slow slide to duopoly. Only aggressive action by the Commission in 2011 and 2012 – adoption of data roaming rules, blocking AT&T’s effort to acquire T-Mobile, and pressure on Verizon to divest spectrum to T-Mobile as part of the Spectrum Co. Review – created any expectation that competition remained viable.

The benefits of competition have become increasingly visible since the FCC and the Department of Justice Antitrust Division (DoJ) took steps to ensure that the market would contain at least 4 national firms. Billions of dollars of new investment flowed into the market as both T-Mobile and Sprint attracted new interest. AT&T began a process of “refarming” its 2G spectrum for 4G use and, spurred by competitive pressure, has moved rapidly to deploy LTE nationally. A revitalized T-Mobile has offered the first innovation in handset upgrades in years, forcing AT&T and Verizon to respond.

It is no coincidence that this dynamic market action follows regulatory action to promote competition, whereas the market remained virtually moribund from 2008-2012 when competition appeared dead. Only competition forces companies to invest in network improvements and pass along efficiencies of scale to customers rather than shareholders. By contrast, when competition declines, the surviving dominant firms can afford to decrease capital expenditures on network improvements because frustrated customers have nowhere else to go.

AT&T and Verizon continue to enjoy dominance in part because of their superior holding of spectrum below 1 GHZ, aka “low band spectrum.” These companies acquired this advantage in substantial part from free low band licenses distributed to the incumbent local exchange carriers (ILECs) before the Commission began to auction spectrum in 1993. To pretend that this market distorting regulatory largess constitutes a free market triumph that regulators should respect is therefore quite disingenuous.

Likewise, the claim that AT&T and Verizon need additional spectrum because of their large customer base profoundly misstates the facts. To the contrary, as noted above, it is competition that forces companies to become efficient and pass those efficiencies on to their customers. As both the Department of Justice and the FCC transaction team found in the AT&T/T-Mobile transaction, AT&T in particular has used spectrum acquisitions to support a profoundly *inefficient* network architecture. Indeed, the fact that Verizon supports more customers with less spectrum demonstrates that the problem for AT&T is not a spectrum shortage to meet demand, but a refusal to reengineer its network to provide more efficient coverage.

The DoJ has emphasized the importance of getting low band spectrum into the hands of competitors. Because the incentive auction represents the last chance to put valuable low band spectrum in the hands of competitors, the FCC should adopt rules of general applicability – as permitted by the Middle Class Tax Relief Act of 2012 – to prevent AT&T and Verizon from capturing the lion’s share of the licenses.

### **The “No Piggies” Rule**

The FCC can achieve this competitive goal in two ways. First, it can adopt a total limit on the amount of spectrum, particularly low band spectrum, a single company can hold. The Commission had such a hard “spectrum cap” until 2003. Not coincidentally, elimination of the spectrum cap initiated a period of steady consolidation and a dramatic decline in competition to the detriment of consumers.

Alternatively, the Commission could adopt an auction specific rule that would prohibit any one company from capturing too many licenses in the 600 MHz auction. This “No Piggies” rule would permit AT&T and Verizon to participate, while leaving significant spectrum on the table to attract many smaller bidders.

### **No Piggies Means More Auction Revenue**

Auction experts will tell you that maximizing revenue requires two things. First, lots of bidders need to show up. Second, they cannot collude to divide the licenses among each other.<sup>9</sup> To achieve step one requires creating a set of rules that encourages as many bidders as possible that they can actually win enough licenses they need to make showing up worth the expense of playing. Participating in an auction costs a great deal of money. Companies go to capital markets to arrange for both the large “up fronts” needed to participate and to be able to pay for the licenses if they win. The companies set up huge “war rooms” with auction experts to track and advise them. Failing to win licenses, not only means the vast expenditure of money and resources is wasted. Publicly traded firms will lose significant stock value if they fail to win

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<sup>9</sup> See, e.g., Paul Klemperer, “Using and Abusing Economic Theory,” Journal of the European Economic Association, 2003, 1, 272–300.

licenses deemed critical to their future growth, or if they are deemed to have been forced by AT&T and Verizon to significantly overpay.

Unless a firm believes it has some chance of success in the auction that will justify the cost and the potential risk of market backlash for a failed auction attempt, it will do better to sit on the sidelines.

Without the No Piggies Rule, there is every reason to believe that AT&T and Verizon will repeat their success from 2008 700 MHz auction. No matter how much T-Mobile or Sprint (or other competitors) may need the spectrum in absolute terms, it is not worth the risk if they cannot win.

A simple analogy illustrates the problem. My neighborhood association sponsors a basketball tournament with a \$10 entry fee and a \$500 prize. Should I enter? Well, if we pretend I am a decent amateur player, then it would make sense. The entry fee is relatively small, and even if I am not the best basketball player in the neighborhood, I am close enough to my neighbors that I believe I have a chance to win.

Now pretend that instead of playing my neighbors, I have the option to participate in a basketball tournament against the 1985-86 World Champion Boston Celtics. The entry fee is \$50,000, but the prize is \$10 million! This is a much higher potential return on my investment than the previous example, albeit for a much higher upfront cost and with a much reduced (*i.e.*, non-existent) chance of winning. Should I enter?

In less I'm in the market for a divorce, the obvious answer is no. This bet makes absolutely no sense despite the potential return on investment. I would need to mortgage my house and go into crippling debt simply to enter the competition, fully aware I would have no chance of winning against Larry Bird today, never mind when he was at the peak of his career.

Similarly, in the absence of a No Piggies Rule, it makes no sense for T-Mobile or Sprint to spend millions of dollars to enter the spectrum auction because they have virtually no chance of winning enough licenses to justify participation. Sadly, spectrum auctions are not Disney movies. Failure is always a (very painful) option, and the need to win does not make winning any more likely than not really needing to win. The fact that these companies really need the spectrum does not, oddly enough, make it any more likely they will win or make it cheaper for these companies to get the necessary capital. To the contrary, the fact that they need the spectrum to remain competitive but are unlikely to win it drives up the cost of capital and increases the backlash when they lose.

Even without a No Piggies Rule to encourage smaller players to participate, the number of potential bidders has dropped significantly since the 700 MHz auction in 2008. Alltel and MetroPCS no longer exist. Leap may not exist by the time the auction takes place.

Opponents of the No Piggies Rule like to paint a stark picture of the auction failing if AT&T and Verizon do not participate. But an auction limited to AT&T and Verizon is equally

likely to fail. The FCC must bring all potential bidders to the table, something only a No Piggies Rule can hope to accomplish.

#### **Band Plan, Bidding Rules and Other Factors**

Numerous other factors impact the likely success of the auction. With regard to bidding rules and other factors such as repacking, we lack a good sense of the FCC's current thinking. These matters will, hopefully, become the subject of future public notices to further develop the record.

With regard to the band plan, the one thing agreed upon by nearly all competitors agree upon is that the band plan should optimize paired spectrum. Inclusion of supplemental downlink (SDL) spectrum below Channel 37 appears more likely to increase competition problems in light of the difficulties in integrating spectrum below Channel 37 with other low band spectrum below 1 GHz. Furthermore, based on the current experience with 700 MHz A & 700 MHz B block spectrum, it seems unlikely that manufacturers will develop equipment for supplemental downlink unless AT&T and/or Verizon capture significant SDL licenses.

#### **Market Variability**

Finally, the Wireless Bureau's May Band Plan Public Notice raised the question of "market variability." This would give the FCC flexibility to recover more spectrum in some markets than in others. Market variability potentially resolves the problem of holdouts in the most constrained markets. Without such flexibility, the FCC is limited in every market to the

spectrum available in the most constrained market. This could essentially starve the auction for spectrum.

At the same time, too much variability creates significant problems. It is highly unlikely that equipment will be developed for the markets where large amounts of spectrum can be recovered given that the largest markets are most likely to be constrained. Commenters have also noted significant interference potential if there is too much variability in the band plan caused by market variation.

To balance these concerns, the Commission needs a *uniform core* with *flexible edges*. The Commission should establish a clear limit on the potential variation from the uniform core set by the most constrained market. This would reduce the value of holding out in the most constrained markets, without introducing so much uncertainty in the band plan as to undermine the ability of potential bidders to adequately assess the value of the licenses.

Thank you to the members of the subcommittees for your time and I look forward to the opportunity answer your questions.

Mr. WALDEN. Mr. Feld, thank you for your testimony. We will now go to Mr. Rick Kaplan, who is the Executive Vice President, Strategic Planning, at the National Association of Broadcasters. Mr. Kaplan, welcome back. We look forward to your testimony as well.

#### **STATEMENT OF RICK KAPLAN**

Mr. KAPLAN. Good morning, Chairman Walden, Ranking Member Eshoo, and members of the subcommittee. Thank you for inviting me on behalf of the National Association of Broadcasters to testify before you today.

NAB is committed to lending its expertise to the subcommittee and the FCC to ensure the successful completion of the world's first ever broadcast incentive auction to the benefit of America's consumers, the U.S. Treasury, and public safety. A properly run auction is also critical to the future of the Nation's broadcast industry.

Now, a casual observer of today's hearing might be led to believe that the upcoming incentive auction is primarily a wireless industry issue. He or she will hear about licensed and unlicensed spectrum, spectrum aggregation limits, and the drive to maximize the amount of spectrum freed up by paying handsomely private equity funds and others on the fringes of broadcasting to relinquish spectrum. The reality, however, is that the industry on which this auction will have the greatest impact is the broadcast industry.

To offer some perspective, according to OSTP and the National Economic Council, the U.S. commercial wireless industry will soon control more than 660 megahertz of spectrum, more than any other commercial enterprise, and well more than its counterparts in nearly every other country. This amount is more than double the spectrum allocated to the broadcast industry, and that is before the incentive auction. In fact, a wildly successful incentive auction will likely contribute less than 15 percent of new spectrum to the wireless industry's overall stockpile.

By contrast, this auction will leave an indelible mark on the broadcast industry. Some 30 percent of the channels on which broadcasters operate will be gone, and we will have to reallocate upwards of 50 percent of the stations that remain on the air. Moreover, potential changes to our coverage areas could greatly impair the ability of a significant number of the nearly 60 million Americans who rely exclusively on over-the-air television to receive the local stations they count on most.

Our goal at NAB is to help those broadcasters who remain on the air continue to have the same opportunities to serve the American people they had prior to the auction: the opportunity for the station in Boston to offer wall-to-wall coverage of the terrifying bombings, the opportunity for the Tri-State area station to help direct local residents to lifesaving services during Hurricane Sandy, and the opportunity for the station in Oklahoma to warn its viewers about the path of deadly tornadoes.

Some have described this auction as a win-win-win, although with the final victory being awarded to the broadcasters. To be candid, from what we have seen so far, we will be lucky to escape with a tie. In any event, to avoid a loss for the broadcast industry, the FCC must ensure three things. First, broadcasters who remain on

the air should not be harmed by the voluntary auction. The Spectrum Act dictates that broadcasters must be able to serve the same coverage area and same viewers they did the day after the auction as they did the day before. The FCC should not, for example, move the goalpost by altering the formula by which they calculate these coverage areas. No harm also means that the FCC should not force remaining broadcasters to go out of pocket for reasonable expenses when they are forced to make way for the wireless industry. The Commission must treat the TV Broadcaster Relocation Fund as its relocation budget. If not, broadcasters could face significant costs associated with moves they never sought and that offer them no benefits whatsoever.

Second, the Commission must develop a band plan that avoids interference between broadcasters and wireless operators. The engineering behind the FCC's variable plan has not yet been vetted in an open forum, and the time has come to put the staff's engineering assumptions to the test. As we know from experience, post-auction interference problems take far longer to fix than if they had been addressed openly, transparently, and thoroughly up front. For the same reason it is essential that the FCC complete international coordination prior to the auction and repacking, an unfinished product leaves the Commission with far less revenue and also forces the Commission into a jagged variable band plan where it has to match broadcasting wireless services in an unprecedented manner across the northern third of the Nation.

Third, despite the fact that low power television and TV translators are not formally protected in the statute, the Commission must nevertheless do all it can to preserve these critical services. As last week's letter signed by 57 House members representing rural and mountainous districts made clear—and I would like to submit that letter for the record, if possible—

Mr. WALDEN. Without objection.

Mr. KAPLAN. Translators are indispensable means by which rural communities, especially out West, receive their free over-the-air news, weather, and emergency news information. Also at a time where the Commission and many Members of Congress have expressed concerns about diversity in media ownership or programming, low power television provides one important answer. If the Commission repacks too aggressively, literally thousands of translators and many more low power television stations will disappear and never return.

In closing, the NAB continues to vigorously support the voluntary market-based incentive auction authorized by Congress and to see it conducted as expeditiously as possible. But we must also remember that getting it done right is more important than simply getting it done right now. Our aim is to preserve a healthy and robust broadcast industry and to continue to serve our local communities in a way that no other service can duplicate. Thank you again for the opportunity to testify, and I look forward to your questions.

[The prepared statement of Mr. Kaplan follows:]



**Hearing on “Oversight of Incentive  
Auction Implementation”**

**United States House of Representatives  
Committee on Energy & Commerce  
Subcommittee on  
*Communications and Technology***

*July 23, 2013*

**Statement of Rick Kaplan  
Executive Vice President, Strategic Planning  
On behalf of the National Association of Broadcasters**

Good morning, Chairman Walden, Ranking Member Eshoo and members of the subcommittee. Thank you for inviting me, on behalf of the National Association of Broadcasters, to testify before you today.

One of NAB's highest priorities is to assist the Federal Communications Commission (FCC or Commission) in successfully conducting the world's first-ever incentive auction. To that end, we have focused specifically on the myriad of engineering challenges inherent in implementing an auction of this magnitude. For example, the auction will be heavily dependent on a repacking framework never before attempted, and may take the unprecedented step of requiring broadcasters to occupy the same channels as wireless carriers in adjacent markets. Throughout the process, NAB has engaged in constructive and fruitful discussions with the wireless and technology industries, as well as the public interest community, to identify potential pitfalls and develop corresponding consensus-based solutions so that the Commission has the best chance for success in this ambitious undertaking.

At the outset, it is important to remember Congress's goals in authorizing the voluntary broadcast incentive auction. It not only envisioned raising revenue for the Treasury, funding a public safety network and generating additional spectrum for mobile broadband, but also preserving a healthy and robust broadcast industry. Congress, and this Committee in particular, understand that broadcasting plays an essential role in the fabric of American life. As we have seen time and time again, the free services that the nation's broadcasters provide to the American public are without equal. Whether it's coverage of Hurricane Sandy, the tornadoes in Oklahoma or the horrific attack in Boston, we all – including the President – turned to local broadcasters for critical, timely

and in some cases, lifesaving information. Indeed, the wireless industry itself refers its customers to local broadcasters to deliver critical information through its mobile telephone alert service. And unlike other services, we remain on the air, reliably available to the public.

Spectrum is the lifeblood of the broadcast industry much as it is for the wireless industry. We are on the cusp of driving new innovations in broadcasting, as we are constantly striving to deliver our local news, and information and unrivaled content to consumers in new, richer formats and on the devices of their choice. To be an innovative force in American life broadcasters, too, need spectrum, and are working every day to help the U.S. lead the world in broadcasting as well as broadband.

The success of this auction is critical for broadcasters, broadband providers and the American public. As Congress conducts its oversight of the incentive auction process, NAB believes that three critical elements will define whether the auction is a success:

*First*, the Commission must design an auction that maximizes revenue in light of engineering constraints and the other valuable services already operating in the 600 MHz band. The simple truth is that, based in part on the promise of the National Broadband Plan, Congress expects to raise substantial revenue from this auction. The auction must pay for itself, provide compensation for the volunteering broadcasters, pay to relocate the non-volunteer broadcasters and invest in a nationwide interoperable public safety network.

To accomplish this, the Commission must maximize licensed *paired* spectrum, and do so *nationwide*. Anything beyond that – whether it be unpaired spectrum, a

jagged variable band plan or a wide swath of unlicensed spectrum in the middle of the new wireless band – will yield little revenue and drive down overall auction revenues.

By focusing exclusively on paired spectrum – and not gobbling up additional spectrum in markets simply because it can through repacking – the Commission would be achieving at least two additional policy goals. First, maintaining focus solely on maximizing paired spectrum nationwide will prevent the Commission from overreaching and therefore will enable unlicensed services to flourish as part of the TV white spaces. On the other hand, if the Commission repacks broadcasters more tightly to squeeze every last megahertz out of the TV band, many unlicensed spectrum proponents have correctly noted that the Commission will concurrently be eliminating unlicensed TV white spaces use, which the FCC has repeatedly explained is a valuable piece of the 600 MHz equation.

In addition, a measured repacking – one tied to achieving nationwide bands of paired spectrum – minimizes the inevitable negative impact the auction will have on TV translators and low power TV. Every megahertz reclaimed through repacking, especially in the West, threatens to eliminate television service to thousands of viewers who rely exclusively on translators for news, weather and emergency information. The impact is particularly acute in tribal areas, where broadcasting via a translator is often the only link to the region, as neither wireless nor even wireline services may be available.

The same holds for low power TV, which is often a major source of ownership and programming diversity in many markets. These outlets are not formally protected in the Spectrum Act, but their importance is undisputed and the FCC should do everything

it can to keep those stations on the air. A measured repacking is the best way to accomplish that goal and to serve the purpose of the statute.

The ability to maximize revenue is also greatly affected by how much progress the FCC makes in coordinating with Canada and Mexico prior to the auction. By treaty and by the Spectrum Act, the FCC is required to coordinate spectrum frequencies with Canada and Mexico. If this coordination process is not successful, the FCC will leave potentially billions of dollars on the table and risk widespread harmful interference between wireless and broadcast services. To maximize revenues, international coordination must be a priority for the Commission and a plan must be in place *prior to* repacking broadcasters.

*Second*, a successful auction will preserve and promote a healthy and robust broadcast industry. Some have described the auction as a win-win-win, the final win being for the broadcast industry. Frankly, NAB does not see a “win” for broadcasters who remain on the air and nothing in the incentive auction Notice of Proposed Rulemaking (NPRM) suggests there is one to be had. At this point, we would settle for a win-win-tie.

For those television stations that choose not to participate in the auction, they must be made whole. If a broadcaster is forced to relocate as a consequence of the auction, it must be fully compensated for reasonable expenses. That was the commitment of former FCC Chairman Julius Genachowski and the intention of Congress in creating the TV Broadcaster Relocation Fund. In addition, every television broadcaster, to the greatest extent possible, should have its coverage area and the viewers it serves preserved. Nearly 60 million Americans rely solely on free, over-the-

air television, and that number is growing every year. Congress clearly sought in the Spectrum Act to protect viewers' ability to receive the same stations over the air as they do today, so long as those stations keep broadcasting. Technologies that allow broadcasters to play their critical role informing the public must also be protected, including maintaining exclusive channels for wireless microphone use.

NAB has serious concerns as to whether this goal will be met. To offer some perspective, two of the lone actions taken by Commission staff since the NPRM was issued have hurt or will, if adopted by the Commission, hurt broadcasters. The first, a Public Notice announcing new changes to the long-standing methodology described in OET Bulletin No. 69 (OET 69), has introduced enormous uncertainty into the repacking process, has produced contradictory results, and threatens to seriously reduce the coverage areas and viewers served by stations across the country. In a nutshell, OET-69 is the method by which the Commission calculates the area each broadcaster serves. In the Spectrum Act, Congress expressly forbade the Commission from altering that method for the incentive auction. We encourage Congress to remind the Commission that the Spectrum Act specified the methodology by which the Commission should generate stations' coverage areas, and it expects the Commission to follow the law.

The FCC's Media Bureau has also taken the aggressive step of freezing all new and *pending* applications by television stations to modify their service areas. As a result, a station with an application pending for years at the Commission, now arbitrarily has no chance of it being processed because the Media Bureau believes the station might be impacted by decisions in the incentive auction proceeding. NAB believes that

no applications should be frozen, and the Commission should continue to process applications in a routine manner until it makes its final determinations. That is especially true in cases where applications were filed before the Media Bureau's previous May 31, 2011 freeze on channel change rulemaking petitions, which was instituted nearly a year before the Spectrum Act was passed. Both broadcasting and broadband are crucial communications services. Simply because an undefined auction is on the horizon, the Commission should not relegate broadcasters to a frozen in time – or effectively second-class – status. At the very least, the Commission could decide the question of which stations are protected in repacking and to what extent. This action would eliminate the alleged need for a freeze and allow the Commission to move forward with parts of the incentive auction proceeding where the record is complete.

*Third*, the creation of the 600 MHz band plan must be informed by the interference challenges faced by the Commission in the recent past and should avoid any harmful interference among services. The auction process does not simply end with the final bid. It will take time to determine whether the new band plan is a success. No matter how much money the auction raises, if it ultimately results in millions of consumers – whether wireless or broadcast – experiencing difficulty receiving the signals that power their devices, the auction will be a failure. Therefore, we must have an open and frank discussion about the engineering implications of our band plan choices – including the challenge of employing market variability – and tackle head-on the difficulties presented.

One final point bears mentioning. An essential element in any process, and especially one this complex, is transparency. The process by which the auction is

developed must be with maximum stakeholder participation and information needs to flow both to and from the Commission. While we applaud Acting Chairwoman Clyburn for taking some important recent steps to increase transparency, the agency's record to date is lacking in this area.

For example, in February 2013, an FCC staff presentation (attached) included what the FCC staff believed to be the seven "Key Components" of the voluntary broadcast incentive auction. They are:

- Broadcaster Options
- Reverse Auction Design
- Repacking of Broadcast Stations
- Forward Auction Design
- 600 MHz Band Plan
- Integration of Forward and Reverse Auctions
- Unlicensed Use / TV Whitespaces

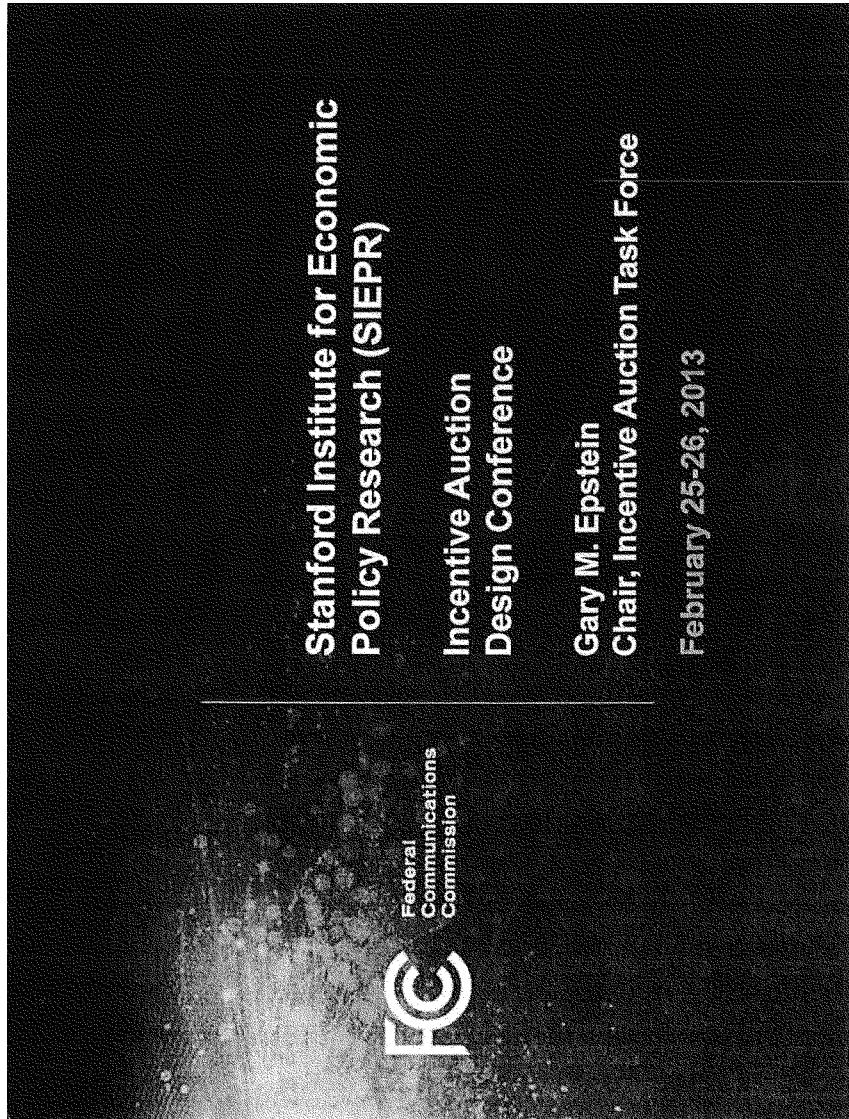
This list is remarkable for the fact that, almost a year and a half after passage of the Spectrum Act, the affected industries still have no clear idea how and when the FCC plans to address these key components. Aside from "Broadcaster Options" – which are, for the most part, statutorily mandated -- and a workshop and public notice regarding potential band plan options, the resolution of the remaining key components are still a complete mystery for much of the outside world.

Rather than just providing a high level overview of these issues, it is essential that staff actively and consistently engage with stakeholders to exchange ideas for developing a successful auction. If stakeholders remain in the dark, the odds of success go down dramatically. We and our counterparts in other industries and the public interest community have a great deal to offer, and are eager to contribute to the final outcome.

We thank the Committee for assuming its oversight function in this process. This role is essential, especially to ensure that the Commission faithfully adheres to the statute this body crafted so carefully to achieve a balance between broadcast and broadband. I urge this Committee to continue to hold such hearings, as it sheds a much needed light on the process and will ultimately lead to a better result.

Thank you again for inviting me here today. The NAB is anxious to see a successful incentive auction and will play an active role in ensuring that happens. I look forward to answering your questions.

Attachment





## Broadcast Incentive Auction: Legislative Direction

*"The Commission shall conduct a reverse auction to determine the amount of compensation that each broadcast television licensee would accept in return for voluntarily relinquishing some or all of its broadcast television spectrum usage rights in order to make spectrum available for assignment through a system of competitive bidding..."*

- Spectrum Act Section 6403(a)(1)



## Broadcast Incentive Auction: Objectives

### Relieve Spectrum Crunch

- Repurpose maximum amount of UHF spectrum while providing for a healthy broadcast industry

### Statutory Fiscal Objectives

- Forward auction proceeds must exceed reverse auction payments
- Cover the repacking reimbursement costs
- Other congressional objectives (FirstNet, deficit reduction)

### Promote Wireless Innovation

- Launchpad for advanced wireless networks
- Contiguous unlicensed band

### Vibrant and Healthy Mobile Market

- Availability of low-band spectrum for a range of mobile broadband providers

4



## Broadcast Incentive Auction: Design Goals

Simplicity

- Want to make bidding for TV broadcasters simple because their participation is critical to the success of the auction

Efficiency

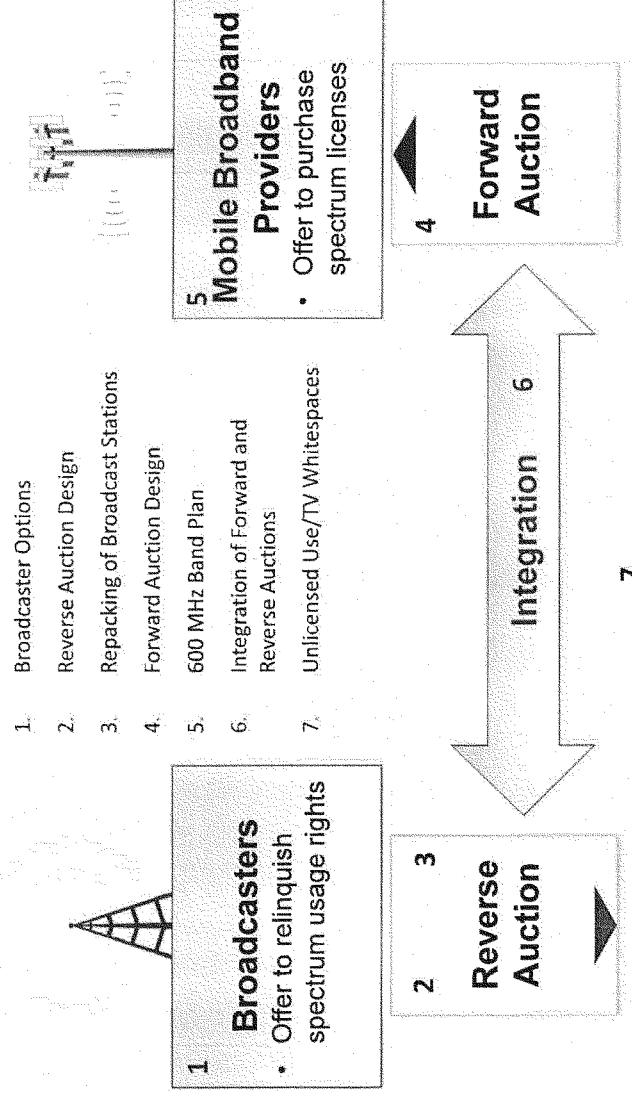
- Measured in terms of both achieving the optimal auction outcome and closing the auction in a timely fashion

Transparency

- Critical for stakeholder buy-in



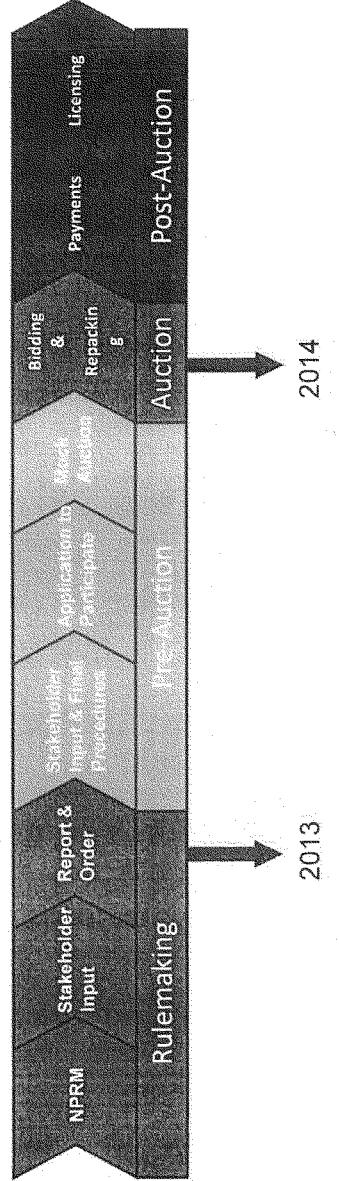
## Broadcast Incentive Auction: Key Components





## Broadcast Incentive Auction: Process

### Incentive Auction Process Timeline



Federal Communications Commission

Mr. WALDEN. Thank you, Mr. Kaplan. We appreciate your counsel.

Now we will turn to Preston Padden, the Executive Director, Expanding Opportunities for Broadcasters Coalition. Mr. Padden, welcome back and we look forward to your comments.

#### **STATEMENT OF PRESTON PADDEN**

Mr. PADDEN. Thank you, Chairman Walden and Ranking Member Eshoo and members of the subcommittee. My name is Preston Padden and I am the Executive Director of the Expanding Opportunities for Broadcasters Coalition of more than 70 television stations interested in participating in the auction, under the right conditions.

Chairwoman Clyburn has provided great leadership in moving this auction forward. Commissioners Pai and Rosenworcel are very constructively engaged in these auction issues. Auction Chair Gary Epstein, Bureau Chiefs Ruth Milkman, Bill Lake, and Julius Knapp are working diligently to develop recommendations for the auction design and rules.

We are cheerleaders for this auction. In 2014, the FCC can reallocate the full 120 megahertz in the National Broadband Plan, even in the largest markets, as we would be happy to demonstrate in detail to the committee staff. The number one challenge facing the FCC is to make sure that payments to broadcasters are sufficiently large to induce a substantial number of TV spectrum sellers to participate in the auction. If a large number of TV stations offered to sell their spectrum, the FCC will succeed in reallocating 120 megahertz and in raising the revenues necessary to pay the selling TV stations, pay the repacking expenses of non-participating stations, fully fund FirstNet, and contribute to deficit reduction. If an insufficient number of TV spectrum sellers participate, the auction will fail at its inception, and there will be no need to debate other issues such as band plans and wireless carrier eligibility. All TV stations enjoy a range of attractive alternatives other than participating in the incentive auction.

To be sure, economists and lawyers easily could construct rules and auction designs such as scoring stations and weighting the auction that would have the effect of limiting payments to potential TV spectrum sellers. But this would lead to less spectrum being offered, less spectrum being reallocated, and less revenue being generated.

Prominent legislators of both parties have expressed their concerns about counterproductive proposals to diminish incentives. On March 13, Chairman Walden issued a statement noting “without broadcasters, there is no spectrum to auction,” and adding “it would be foolhardy to limit the incentives from the get-go.” On June 4, the chairman emeritus of the full committee, Congressman Dingell, wrote a letter asking the FCC to estimate the effect of scoring and weighted auctions on the number of participating TV spectrum sellers and on the amount of spectrum recovered. The FCC will be buying spectrum, not TV station businesses. Scoring based on characteristics of the station is irrelevant to the auction, and the statute authorizes the FCC to pay stations based on competitive bidding, not based on scoring.

Finally, as we understand the FCC's likely auction design, it will freeze those stations with the greatest clearing and repacking impact at high-priced early rounds of the auctions, while stations with lesser clearing and repacking impact continue to descend to lower priced rounds, thereby automatically paying more to the stations most important to the FCC's clearing goal. Simply put, the FCC should offer the same high initial prices to all stations in the same market and rely on the statutorily prescribed auction to discipline final prices.

We urge the Commission to provide broadcasters with more information about auction design and rules. If there are border markets where the FCC cannot recover 120 megahertz at this time, we support a variable band plan to avoid a lowest common denominator limitation on nationwide spectrum recovery. The FCC should allow stations to channel share with any other station in their DMA, and to change their city of license to match the host sharing partner. The FCC should continue its productive discussions with Mexico and Canada without making the final conclusion of those discussions an obstacle to holding the auction in 2014, just as the FCC previously has conducted other auctions without final resolution of border issues.

Finally, the clear congressional priorities of funding FirstNet and making a dent in the deficit militate against restricting participation in this auction by any wireless carrier. We need robust competition among all wireless carriers to assure that the auction produces the maximum revenues possible. Concerns about market concentration should be left to another proceeding on another day when they may well have been obviated by the recent dramatic marketplace strengthening of Sprint and T-Mobile.

Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Padden follows:]

**United States House of Representatives  
Committee on Energy and Commerce  
Subcommittee on Communications and Technology**

**Hearing on  
*Oversight of Incentive Auction Implementation***

**Testimony of Preston Padden  
Executive Director  
Expanding Opportunities for Broadcasters Coalition**

**Introduction and Summary**

Thank you Chairman Walden, Ranking Member Eshoo and members of the Subcommittee. My name is Preston Padden, and I am the Executive Director of the Expanding Opportunities For Broadcasters Coalition. Our Coalition represents more than 70 television stations interested in participating in the Incentive Auction under the right conditions. We are cheerleaders for a successful Auction in 2014.

Chairwoman Clyburn has provided great leadership in moving the Auction forward with an admirable commitment to openness and transparency.<sup>1</sup> Commissioners Pai and Rosenworcel are very constructively engaged in Auction issues and both have offered insightful comments and suggestions.<sup>2</sup> Auction Task Force Chair Gary Epstein and Bureau Chiefs Ruth Milkman, Bill Lake and Julius Knapp – all people of great experience and integrity – are working diligently to develop recommendations for the auction design and Rules.

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<sup>1</sup> See Prepared Remarks of FCC Acting Chairwoman Mignon L. Clyburn to CTIA 2013 (May 21, 2013), available at <http://www.fcc.gov/document/remarks-fcc-acting-chairwoman-mignon-l-clyburn-ctia-2013>.

<sup>2</sup> See Prepared Remarks of FCC Commissioner Jessica Rosenworcel to CTIA 2013 (May 22, 2013), available at <http://www.fcc.gov/document/commissioner-rosenworcel-s-speech-ctia-2013>; Opening Remarks of FCC Commissioner Ajit Pai at CTIA 2013 Panel "Spectrum Incentive Auctions: Step Right Up!" (May 22, 2013), available at <http://www.fcc.gov/document/commissioner-pais-speech-ctia-2013>.

**Maximizing The Prospect Of A Successful Incentive Auction**

The number one challenge facing the FCC is to make sure that payments to broadcasters are sufficiently large to induce a substantial number of TV spectrum sellers to participate in the Auction. The Incentive Auction will not succeed, and the policy goals underlying the Middle Class Tax Relief and Job Creation Act of 2012 (the “Spectrum Act”) will not be fulfilled, unless a sufficient number of TV spectrum sellers voluntarily walk through the front door of this Auction. If a large number of TV Stations offer to sell their spectrum, the FCC will succeed in reallocating 120 MHz of spectrum and in raising the revenues necessary to pay the selling TV Stations, to pay the repacking expenses of non-participating Stations, to fully fund FirstNet, and to contribute to deficit reduction. However, if an insufficient number of TV spectrum sellers participate, the auction will fail at its inception and there will be no need to debate other issues such as band plans and wireless carrier eligibility.

The “Incentive” that Congress chose to effect this historic transfer of spectrum from broadcasting to wireless broadband is payments to TV Stations. If Stations are offered prices that meet or exceed their

expectations for the value of their spectrum, as repurposed for wireless broadband, they will sell. The prospect of large payments will attract spectrum sellers. But, the converse is true as well. The prospect of smaller prices will discourage participation. All TV Stations enjoy a range of attractive alternatives other than participating in the Incentive Auction – from continuing to operate profitable enterprises, to selling their stations in a hot M&A market, to awaiting the next incentive auction or even an opportunity to sell their spectrum directly to one or more wireless providers who are willing to pay more for the spectrum than the FCC.

To be sure, economists and lawyers easily could construct Rules and Auction designs, such as “scoring” stations and “weighting” the Auction that would have the effect of limiting payments to potential TV spectrum sellers. But, this would lead to less spectrum being offered, less spectrum being reallocated, and less revenue being generated.

Making sure that payments meet the expectations of TV spectrum sellers is not a partisan issue. Prominent legislators of both parties have expressed their concerns about counterproductive notions of diminished incentives. On March 13, 2013, Chairman Walden issued a

Statement noting, "Without broadcasters there is no spectrum to auction," adding that "it would be foolhardy to limit the incentives from the get go."<sup>3</sup> On June 4, 2013, the Chairman Emeritus of the full Committee, Congressman Dingell, wrote a letter asking the FCC to estimate the effect of "scoring" and "weighted auction" proposals on the number of participating TV spectrum sellers and on the amount of spectrum recovered.<sup>4</sup>

It is important to remember that the FCC will be buying spectrum, not TV station businesses. Scoring based on characteristics of the Station is irrelevant to the Auction. And, the Spectrum Act authorizes the FCC to pay Stations based on "competitive bidding" – not based on scoring. Finally, as we understand the FCC's likely Auction design, it will freeze those Stations with the greatest clearing/repacking impact at high priced early rounds of the Auction while Stations with lesser clearing/repacking impact continue to descend to lower priced rounds, thereby automatically paying more to the Stations most important to the FCC's clearing goal. Simply put, the FCC should offer the same high

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<sup>3</sup> See Press Release, Rep. Greg Walden, *Keeping the Incentive in Incentive Auction* (Mar. 13, 2013).

<sup>4</sup> See Letter from Rep. John Dingell to Hon. Mignon Clyburn, Acting FCC Chairwoman (June 4, 2013).

initial prices to all Stations in the same market and rely on the statutorily prescribed Auction to discipline final prices.

Price is only part of the equation. Broadcasters have received only a very limited amount of information regarding Auction design and Rules since the FCC adopted its Notice of Proposed Rulemaking last September. This information vacuum could severely disrupt the incentive auction as television stations pursue other alternatives that provide greater certainty and, potentially, more lucrative returns. The recent sales of entire station groups, including stations in some of the largest markets with the greatest spectrum needs, demonstrate that broadcasters are rife with opportunity.

Our Coalition believes that the goal, first articulated in the FCC's National Broadband Plan, of reallocating 120 MHz nationwide, is readily attainable in the great majority of the country. If there are border markets where the FCC cannot recover 120 MHz, those markets should not artificially restrict the transfer of spectrum and the corresponding incentive auction revenues in the rest of the country. Instead, our Coalition supports a variable band plan, which would avoid a "lowest-

common-denominator” limitation by allowing the FCC to recover as much spectrum as practicable in all areas.

The FCC also should maximize the amount of spectrum available in border areas by continuing its productive discussions with Mexico and Canada. At the same time, the final conclusion of those discussions should not serve as an obstacle to holding the Auction in 2014. The FCC previously has conducted Auctions without final resolution of border issues, and it should do the same here.

Another excellent idea from the National Broadband Plan is channel sharing – where two stations that currently occupy 12 MHz of spectrum could relinquish one of the channels at auction and consolidate into a single, 6 MHz channel. This will enable the FCC to recover much needed spectrum while strengthening stations that elect to share. But Congress and the FCC must not allow rules from a bygone era to interfere with this win-win solution. Under the FCC’s existing rules, channels would be limited to sharing “partners” that deliver a broadcast signal over their city of license. So a television station could go off the air entirely, with no objection, but that same station would be unable to relinquish its spectrum and share with another station in the

same Designated Market Area that does not cover the original station's city of license. This makes no sense and is antithetical to Congress' goals in adopting the Spectrum Act. The FCC should allow Stations to "channel share" with any other Station in their DMA and to change their city of license to match the host sharing partner.

Finally, the clear Congressional priorities of funding FirstNet and making a dent in the deficit militate against restricting participation in this Auction by any wireless carriers. We need robust competition among all wireless carriers to assure that the Auction produces the maximum revenues possible. Concerns about market concentration should be left to another proceeding, on another day, especially given that such concerns may well have been obviated by the recent dramatic marketplace strengthening of Sprint and T-Mobile.<sup>5</sup>

### **Conclusion**

We appreciate this opportunity to discuss one of the most important issues shaping our nation's communications future. Our members want to be a part of the solution to the issues driving this

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<sup>5</sup> See, e.g., Joan Engebretson, *New Sprint, T-Mobile Plans Threaten AT&T, Verizon Dominance*, Telecompetitor (July 12, 2013, 10:55 a.m.), available at [http://www.telecompetitor.com/new-sprint-t-mobile-plans-threaten-att-verizon-dominance/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+Telecompetitor%28Telecompetitor%29](http://www.telecompetitor.com/new-sprint-t-mobile-plans-threaten-att-verizon-dominance/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+Telecompetitor%28Telecompetitor%29).

auction, and we look forward to continuing to work with the Committee and the FCC to make the incentive auction a reality.

Mr. WALDEN. Mr. Padden, thank you for your testimony. We will now move to Kathleen Ham, who is the Vice President, Federal Regulatory Affairs of T-Mobile. Welcome.

#### **STATEMENT OF KATHLEEN HAM**

Ms. HAM. Thank you. Good morning, Chairman Walden, Ranking Member Eshoo, and members of the subcommittee. My name is Kathleen O'Brien Ham, and I am the Vice President for Federal Regulatory at T-Mobile U.S. Thank you for inviting me to testify today.

T-Mobile is the fourth largest wireless carrier, serving about 43 million subscribers and employing 38,000 people in the U.S. Since the government blocked our merger with AT&T 18 months ago, we have been reinvigorating our brand and our network. Earlier this year, we announced our uncarrier strategy, setting us apart from our larger competitors. We dropped traditional price plans in favor of affordable, simple choice plans. We said there is no need for annual service contracts anymore. We gave customers the option to bring their own device or buy one from us, interest free. We launched JUMP, so customers can upgrade their phones when they want, not when they are told.

These innovative moves are putting pressure on our larger competitors who are now copying our offers. That is what healthy competition achieves. On top of all this, we are rolling out our 4G LTE at a record-shattering pace.

The upcoming incentive auction is critical to the future of wireless competition. Spectrum is the air we breathe. Without it, we cannot compete and we cannot innovate. The FCC should maximize the amount of spectrum auction for mobile use. More spectrum is good for competition and good for auction revenues, plain and simple. We commend the Commission for its ongoing work to develop auction rules. To ensure the rules promote competition and consumer choice, the FCC should consider three critical objectives.

First, encourage broadcaster participation to maximize the amount of spectrum auctioned. Second, adopt a 600 megahertz band plan that maximizes auctioning paired spectrum for mobile use. Finally, and most important, adopt reasonable spectrum aggregation limits so the dominant carriers do not foreclose other competitors from this last best opportunity to acquire low band spectrum.

All carriers agree there needs to be competitive limits on spectrum. The only dispute is how and when to employ them. T-Mobile has proposed an overall limit on the amount of low band spectrum that any carrier can hold, and we have said no carrier would be shut out of the incentive auction in any market, even if they otherwise exceed the limit.

Despite what you may be hearing, limits on spectrum concentration are consistent with Congress' 1993 directive to promote competition. It is that visionary law that is the basis of the billions of dollars in investment and the creation of millions of jobs that wireless competition has channeled into the U.S. economy for the past 2 decades.

Why do we need reasonable spectrum aggregation limits? Three reasons. First, all spectrum is not created equal. The 600 mega-

hertz spectrum penetrates buildings, is cheaper to deploy in both rural and certain urban settings. Today, the two largest carriers control about 80 percent of the spectrum below 1 gigahertz, half of which they got for free from the government in the 1980s. All carriers need a mix of both high and low band spectrum to effectively compete. T-Mobile, even with its good high band spectrum position today, holds no low band spectrum. Second, the two dominant carriers have much to lose from competition. Their market power gives them a significant incentive, an ability to acquire spectrum to block competition. By contrast, T-Mobile and other smaller carriers value spectrum solely based on its use. Without market power, you don't pay more for spectrum than the use value derived from it, no matter who your shareholders are. In a letter shared with the subcommittee yesterday, smaller and rural carriers joined T-Mobile in calling for low band limits to protect competition. Finally, up front limits enhance auction revenue. Without them, smaller bidders may decide to sit out the auction or curtail their participation.

Without a doubt, this auction will have a critical impact on the competitive future. The right policy choices will foster competition and investment. The wrong choices will move us backward. Thank you for inviting me to testify today, and I am happy to take any questions.

[The prepared statement of Ms. Ham follows:]

TESTIMONY OF KATHLEEN O'BRIEN HAM  
VICE PRESIDENT, FEDERAL REGULATORY AFFAIRS,  
T-MOBILE US, INC.

on

OVERSIGHT OF INCENTIVE AUCTION IMPLEMENTATION

before the

SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY  
HOUSE COMMITTEE ON ENERGY AND COMMERCE

July 23, 2013

**TESTIMONY OF KATHLEEN O'BRIEN HAM  
VICE PRESIDENT, FEDERAL REGULATORY AFFAIRS,  
T-MOBILE US, INC.**

Good morning Chairman Walden, Ranking Member Eshoo, and Members of the Subcommittee. My name is Kathleen O'Brien Ham, and I am the Vice President of Federal Regulatory Affairs for T-Mobile US, Inc. I have responsibility for T-Mobile's policy agenda before the FCC and other governmental bodies, and have worked at the company for more than nine years. Prior to joining T-Mobile in 2004, I worked for fourteen years at the Federal Communications Commission in a number of top policy positions, including Deputy Chief of the Wireless Telecommunications Bureau and as the first Chief of the FCC's Spectrum Auctions Program. Thank you for inviting me today to testify regarding the upcoming incentive auction of 600 MHz broadcast spectrum.

**T-Mobile is Shaking up the Wireless Industry**

Headquartered in Bellevue, Washington, T-Mobile offers nationwide wireless voice, text, and data services to individual and business customers. We are the fourth largest wireless carrier in the United States and serve approximately 43 million subscribers, employ almost 38,000 people with a payroll of more than \$2 billion, and invested more than \$3.5 billion last year in the U.S. Since the government scuttled our acquisition by AT&T 18 months ago, we have been busy re-introducing ourselves to consumers and reinvigorating our brand and our network. Most recently, we merged with the 5th largest wireless carrier MetroPCS and we are moving ahead to integrate that value player into our business and extend the MetroPCS brand to new markets for the benefit of consumers and the economy.

T-Mobile is the upstart innovator in the wireless market today, and the last several months have been especially eventful for us. In March, we announced our “Un-carrier” strategy to set us apart from our larger competitors and address the pain points that are at the heart of consumer frustration with wireless. In just a short time, we have eliminated traditional pricing plans in favor of affordable new “Simple Choice” plans that offer unlimited talk, text and Web, and we have addressed the worst pain point of all – by eliminating the need for annual service contracts. T-Mobile customers can now bring their own device to our network or they can buy and even finance it with us, interest free – and this includes the iPhone. We also launched JUMP, a groundbreaking offer that allows customers to upgrade their phones when they want, not when they are told.

T-Mobile’s innovative moves are putting pressure on our competitors, forcing other carriers – including AT&T and Verizon – to follow suit and start treating their own customers differently. That’s what healthy competition achieves. And on top of all this, we are also rolling out 4G LTE at a record-shattering pace – recently achieving service in 116 metro areas with plans to make LTE available to 200 million people by the end of this year. In just six months, we have gone from covering from zero to 150 million people with commercial LTE service – from 7 markets to 116 areas between March and July.

#### **The Future is Now for Competitive Carriers**

T-Mobile firmly believes the incentive auction should be designed to maximize the amount of spectrum that can be auctioned for mobile broadband services. That will in turn ensure significant auction revenues and promote competition in the wireless marketplace.

As a wireless carrier, spectrum is the air that we breathe. Without it, we cannot compete. Sufficient spectrum is also necessary for carriers to provide the range and quality of services that

benefit the entire economy. But spectrum supply is uniquely controlled by the government and is in limited supply. All carriers, including T-Mobile, are doing their best to fill in gaps in coverage by buying and swapping spectrum in the secondary market, but that is not good enough for the future. The 2012 Spectrum Act took an important step toward alleviating the well acknowledged spectrum crunch by giving the FCC “incentive auction” authority to reclaim broadcast spectrum in the 600 MHz band and convert it to wireless broadband use. T-Mobile commends Chairmen Upton and Walden, Ranking Members Waxman and Eshoo, and this Subcommittee, for their leadership and commitment to promoting growth, competition, and innovation in mobile broadband services for all Americans by passing this critical legislation.

Making broadcast spectrum available for wireless use provides a unique opportunity to help meet growing spectrum needs by providing access to critical low-band frequencies that are vitally important in providing in-building and wide-area coverage on an efficient basis.

The FCC is now taking steps to implement the Spectrum Act by developing rules that will govern the incentive auction. We commend the Commission and its staff for their hard work over the past months in developing auction rules and a band plan for the recovered spectrum. In order to ensure that this spectrum is put to its best use in a way that promotes competition and consumer choice, the FCC’s final rules should fulfill three critical objectives. *First*, the FCC should encourage widespread broadcaster participation in the auction so as to maximize the amount of spectrum auctioned. *Second*, the Commission should adopt a band plan for the 600 MHz spectrum that maximizes the amount of paired spectrum auctioned for wireless broadband services. *Third*, the FCC should adopt reasonable limits on spectrum aggregation to ensure the two dominant carriers do not foreclose other competitors as the Department of Justice has warned could happen. No one argues that there should be *no* limits on spectrum aggregation,

either generally or in the incentive auction in particular; the only dispute is about the means by which the Commission should implement this policy.

Taken together, these measures will promote a robust auction that will favor competition and consumer choice and deliver generous revenue for the Spectrum Act's objectives.

**The Commission Should Structure the Reverse Auction So that Broadcasters Are "All In"**

A successful forward auction is one in which there is a lot of recaptured broadcast spectrum. To ensure that happens, the Commission should adopt clear reverse auction rules and get the word out to broadcasters about the benefits of participation. The incentive auction is 100% voluntary. No broadcaster has to participate, but we believe many will want to and should be encouraged to participate. After all, the value of a spectrum license is derived from the value of how that spectrum is used, and the demand for wireless broadband continues to explode year after year, while the number of Americans receiving over-the-air broadcasts continues to fall.

*Give Broadcasters Bidding Options*

To promote broadcaster participation, the FCC has said it wants to make submitting a bid both simple and financially rewarding for the broadcasters. We think that is a critical piece of the auction puzzle. Broadcasters should not only have the option to turn in their licenses and cease broadcasting (in exchange for payment), but also the option to shift to another band or share spectrum with another broadcaster. The FCC should start the reverse auction with high opening prices to attract broadcasters and increase the chances that there will be enough broadcaster participation to clear the target amount of spectrum. Then, if there are more broadcasters willing to sell than necessary, the FCC can lower the price. Flexibility for broadcasters, coupled with high opening bids in the reverse auction increases the chances that

broadcasters participate and get paid, and that spectrum is transferred to a more socially efficient use.

*Make Post-Auction Rules Transparent*

After the broadcast auction, some broadcasters will be required to relocate to different spectrum, or be “repacked.” The Commission’s repacking plans should also maximize the amount of spectrum made available for wireless use by laying out clear rules about how repacking will occur and how broadcasters will be reimbursed for repacking costs. The Spectrum Act requires the Commission to make “reasonable efforts” to maintain coverage area and the population served. To do that, the Commission can and should require all broadcasters to provide it with an inventory of their equipment and facilities that will be affected, along with an estimate of the repacking costs. Finally, the FCC should also adopt firm milestones that a broadcaster must satisfy prior to receiving full payment for relinquishing its spectrum to ensure timely and predictable relocation.

**The Band Plan for 600 MHz Should Promote the Most Efficient Use of the Spectrum**

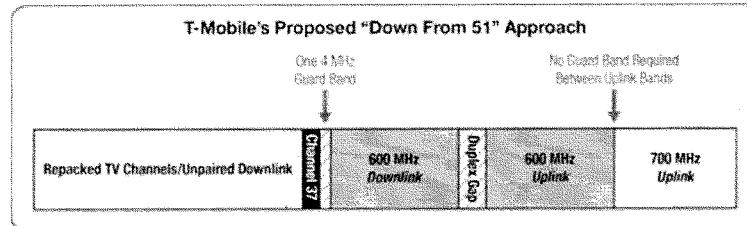
T-Mobile is a strong advocate for maximizing the amount of spectrum available for auction. More spectrum is going to translate into more competitive opportunity and more revenue – plain and simple. We have proposed arranging the reclaimed spectrum so that it can be paired, with specific spectrum dedicated to handset use and other spectrum allocated for base stations. A paired configuration offers flexibility depending on how much broadcast spectrum is recaptured, is the most efficient use of the spectrum, and is the method most preferred by carriers.

*The Down From 51 Plan Allows Multiple Competitors*

There is no single perfect band plan for the recovered broadcast spectrum, and the Commission staff has offered a range of thoughtful alternatives for structuring these frequencies for broadband use. Interested stakeholders have also offered proposals. T-Mobile joined AT&T, Verizon, the National Association of Broadcasters, Intel and Qualcomm in endorsing the so-called “Down from 51” band plan, which would designate the reclaimed spectrum in the frequencies adjacent to the TV channels next to channel 51 for uplink (handset) use, with downlink (base station) spectrum below that and a duplex gap between the two. T-Mobile proposed that these frequencies be organized into two 35 megahertz blocks of paired spectrum, consisting of seven paired five-megahertz licenses (a total of 10 megahertz for each license).

As shown in Figure 1 below, this band plan assumes that the FCC will recapture the equivalent of eight broadcast channels, or 84 megahertz, with 10 megahertz serving as the duplex gap between the uplink and downlink and a 4 megahertz guard band between the downlink and TV channel 37. We recommend that no matter the result of the broadcast reverse auction, there be a uniform amount of spectrum designated for downlink, or base station operations, across regions which would promote interoperability across the entire band. If there is *more* than 84 megahertz of recaptured spectrum, it would be designated for flexible use operations, below TV channel 37.

**Figure 1: T-Mobile's proposed 35x35 MHz band plan.**



T-Mobile's proposed configuration increases the opportunity for bidders to acquire critical, high-value low-band spectrum. It also allows up to three competitors each to acquire enough contiguous spectrum (assembling spectrum in paired 10 megahertz blocks) to operate at the highest possible levels of efficiency. In addition, this plan offers the greatest public benefits with the fewest and least extensive technical, economic and competitive deficiencies.

We are optimistic that there will be at least 84 megahertz cleared in a substantial majority of markets. In most markets, the number of stations that would have to sell their licenses to get to 84 megahertz is fairly small. The availability of spectrum will depend in part on the plan adopted by the FCC for repacking the broadcast band, and we look forward to working with the FCC on that plan to ensure it both protects broadcasters and provides an opportunity to auction a robust supply of new spectrum for mobile broadband.

However, our plan also recognizes that the FCC may not be able to capture 84 megahertz of spectrum in every market. In those circumstances, the amount of downlink spectrum would remain the same, and the shortfall would come out of the uplink band, where broadcast operations would continue. While incorporating broadcasters anywhere above TV channel 37 is not optimal because it could otherwise be used for wireless broadband, the potential for some degree of “market variability” and broadcast use of what is in other places wireless broadband spectrum does not pose a serious interference threat, especially so long as only a minority of

markets are affected. As we've shown in our comments to the FCC, broadcasters can operate in the uplink band and interference concerns are unlikely to occur under real-world conditions using filtering technology. Assertions of the need for enormous separation between broadcast and mobile broadband operations are not accurate.

T-Mobile and others also have recommended that the FCC adopt a flexible approach to the band plan depending on the spectrum clearing target. In a typical auction, the FCC knows how much spectrum it will assign before it starts selling licenses, and the agency designs the band around the total megahertz involved. The incentive auction is different. Here, the FCC will not know how much spectrum it can assign until *after* the auction ends. Unless the FCC makes a very good guess about the total number of megahertz sold, the agency runs the risk that the band plan design will be ill suited to the number of licenses sold.

Rather than run the risk of guessing wrong, the FCC could allow for different band plans for different levels of spectrum cleared. And it can do this largely because the intent is to sell fungible blocks of spectrum. T-Mobile has recommended the FCC consider this type of contingent band plan to ensure that – no matter how much spectrum is cleared – the FCC makes as much spectrum as possible available for broadband use in the most efficient manner possible.

#### **The Upcoming 600 MHz Auction Can Help Drive Competition**

In the wake of spectrum scarcity, the 600 MHz auction represents the last best chance to promote competition – providing an important opportunity for carriers to enhance their spectrum portfolios with valuable low-band spectrum. There is no other low-band spectrum on a scale like this to be sold by the government for the foreseeable future. To meet this objective, however, the FCC must impose reasonable limits on how much spectrum any one entity can bid for in the “forward auction” of spectrum that is reclaimed from the broadcasters, not unlike what the

Commission has employed before in very successful auctions. T-Mobile has proposed a one-third limit for below 1 GHz spectrum to effect the Commission's statutory obligation to "avoid excessive concentration of licensees," and that would ensure availability of this spectrum for all providers, fostering a competitive wireless industry that will continue to develop new and innovative services. Aggregation limits will help ensure competition from the widest array of providers – small and large, regional as well as national – giving consumers the benefits of marketplace choice. Without appropriate limits, by contrast, the two dominant carriers could squeeze out competitors, reducing consumer choice and thwarting the type of innovation that T-Mobile and smaller carriers are introducing to the wireless marketplace today.

That said, I want to emphasize that under our version of spectrum limits, *no carrier would be shut out of 600 MHz spectrum in any market*, consistent with Congress's directive that the Commission not prevent qualified entities from participating in the auction. Our "minimum access plan" would ensure that a carrier could always acquire a 10-megahertz block of paired spectrum even where they would otherwise exceed the proposed sub-1 GHz limit, and at the same time limit the ability of the two largest carriers to foreclose competition from one of the most important spectrum auctions the FCC has run in more than a decade.

*Aggregation Limits Are Particularly Important in Low-Band Spectrum*

Reasonable limits are particularly important for the spectrum that will be offered in the incentive auction, because it is located below 1 GHz. This low-band spectrum is uniquely valuable because it penetrates buildings much better and covers a much wider geographic area with fewer transmitters and at a lower cost than spectrum above 1 GHz. These advantages cannot be replicated as efficiently with only higher-band spectrum, even if carriers make the investments needed to deploy and operate systems in those bands, as T-Mobile has. Cost-

effective service provision requires a portfolio of low-band and high-band spectrum. Today, the two largest carriers hold about 80% of the spectrum below 1 GHz – about half of which they got for free from the government in the early 1980s when cellular licenses were handed out to the local telephone companies. A reasonable limit on how much more they can get in the future will ensure that all carriers have a shot at the mix of high- and low-band spectrum that enables a provider to compete most effectively.

*Congress and the FCC Have Long Recognized the Importance of Reasonable Spectrum Aggregation Limits*

When Congress passed the auction statute in 1993, it specifically directed the FCC to “promote economic opportunity and competition” by disseminating licenses among a wide variety of applicants. That is still the law today. Limits for the incentive auction are consistent with that directive and with the Commission’s long-standing efforts to ensure that the wireless marketplace is competitive. For example, in the past the FCC imposed a hard *cap* that prohibited the two cellular licensees from obtaining more than 10 megahertz of broadband personal communications service (“PCS”) spectrum and prohibited carriers from obtaining more than 40 megahertz of total spectrum allocated to broadband PCS. The Commission later replaced this rule with another cap, this time of 45 megahertz of spectrum designated for commercial mobile radio service systems. The procompetitive policies enacted by Congress and implemented by the Commission triggered the investment of hundreds of billions of dollars in wireless networks and services that have in turn fostered growth and development in every sector of the economy. These pro-competitive policies are the reason T-Mobile exists today; they enabled our company to enter the wireless market at a time when an entrenched cellular duopoly thrived.

It also cannot be overlooked that ensuring a competitive wireless marketplace leads directly to many economic benefits. The Commission has successfully raised more than \$50

billion dollars by promoting wireless competition and conducting over 80 wireless spectrum auctions. History has also shown that when carriers like T-Mobile acquire new spectrum, they put it to good use enlarging and enhancing their national network, which translates into significant capital investment and new job opportunities throughout the U.S.

*Without Limits in the Auction, the Two Dominant Carriers Can Foreclose Competitors*

Spectrum aggregation limits in the auction are even more important today, given the structure of today's marketplace, where 75% of customers are served by the two largest carriers. Economists acknowledge that all resources have a "use" value – the amount of return on investment a carrier can earn from the asset. But economists also know that in highly concentrated markets, resources can have a "foreclosure" value – the additional return on investment a dominant player with market power can earn by preventing its competitors from gaining access to these important resources. The risk is especially pronounced in the upcoming 600 MHz incentive auction. Given the current market positions of the two largest carriers and their concentrated holdings in the valuable spectrum below 1 GHz – nearly 80% – they have much to lose from increased competition. That gives them a significant incentive and ability to acquire spectrum to prevent other wireless carriers from doing so.

Contrast that with T-Mobile and other smaller carriers. We do not place a "foreclosure value" on spectrum. Rather, we value spectrum solely based on the use we can make of it. And that doesn't change because our largest shareholder has substantial financial resources. You don't pay more for spectrum than the value you derive from it, no matter who your shareholders are. Nor do we have the luxury of waiting several years to deploy spectrum after acquiring it for billions of dollars as the two largest carriers have.

In a recent filing with the FCC, the Antitrust Division of the Department of Justice (“DOJ”), the agency charged with protecting competition, raised exactly this concern – that the two largest carriers might engage in bidding driven by the desire to foreclose rivals from obtaining spectrum, rather than by their desire to obtain spectrum for its “use value.” To address this concern, DOJ proposed that the FCC adopt reasonable spectrum aggregation limits. DOJ also noted that it is particularly important to guard against the excessive concentration of spectrum below 1 GHz because “[t]oday, the two leading carriers have the vast majority of low-frequency spectrum, while the two other nationwide carriers have virtually none.”

*Clear Limits Provide More Certainty in Auctions*

Some have suggested that there should be no limits on bidding because the FCC can evaluate the spectrum holdings of auction winners, on a case-by-case basis, after the auction has concluded. While this approach is fine for private transactions between carriers, it would not work in an auction. An upfront limit would allow all auction participants to know *in advance* how much spectrum both they and their rivals could purchase in the auction.

Clear up-front rules that prevent the auction from being dominated by just a few carriers will also encourage auction participation. High participation, in turn, will increase bidding and produce higher auction revenues, providing the funds needed to compensate broadcasters, meet the needs of the nation’s first responders, and reduce the deficit. Without a clear spectrum-aggregation limit, smaller bidders may simply assume that defeat is inevitable and may not participate, which could reduce bidding and thus auction revenues.

After-the-fact remedies, such as those AT&T has supported, are no substitute for competitive limits adopted prior to the auction. Implementing FCC-mandated spectrum divestitures after an auction has never been done before to effect a competitive auction because it

just doesn't work. Smaller carriers, faced with the uncertainty of an after-the-fact review, may decide to avoid the auction and commit their limited financial capital to other activities. Even large bidders would be affected by this uncertainty, discounting their bids to reflect the risk that a post-auction review could require them to divest some of the licenses they win. Moreover, if the post-auction review requires divestiture, a carrier is typically under no obligation to sell assets to the carrier that values the resource most highly or will best use it to drive down prices or improve the terms of service. By contrast, upfront spectrum limits would avoid the gamesmanship, costs, and delays associated with post-auction regulatory reviews and avoid prolonging the uncertainty about how spectrum would be allocated.

*Pro-Competitive Limits Will Not Affect the Auction Revenues or the Amount of Spectrum in the Market*

We are confident that reasonable aggregation limits will not reduce auction revenues, and that in fact they could actually increase revenues by fostering a more competitive auction. But to ensure that the auction achieves the Spectrum Act's revenue targets, we have proposed a Dynamic Market Rule ("DMR") that could be seamlessly and simply incorporated into the FCC auction design. The DMR will also ensure that our proposed spectrum aggregation limits have no detrimental effect on the amount of broadcast spectrum tendered for auction or adversely affect television broadcasters (both those who want to sell and those who wish to continue broadcasting).

Under the DMR, the auction would first proceed with the one-third limit on spectrum holdings below 1 GHz we propose. If the FCC's revenue target is met while the limit is in place, the auction would close under its usual rules. If the revenue target is not met, the spectrum aggregation limit would be gradually relaxed. Because the gradual relaxation could lead to aggressive bidding competition between companies who were initially limited on how much

spectrum they could obtain, the DMR could lead to *greater* revenues than an auction with no restrictions at all.

**Conclusion**

The upcoming incentive auction is a critical opportunity for wireless carriers like T-Mobile and other smaller carriers to secure the low-band spectrum capacity needed to meet escalating consumer demand and effectively compete against our larger competitors. We encourage Congress to work with the FCC to adopt the auction rules I have outlined today in order to ensure that the opportunity is realized. A successful incentive auction will maximize the amount of spectrum made available for wireless broadband, encourage robust participation, raise significant revenues and provide the framework for a competitive wireless marketplace of the future.

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Thank you again for the opportunity to appear before you today. T-Mobile appreciates this Subcommittee's continued focus on this important issue and we look forward to continuing to work with you.

Mr. WALDEN. Thank you very much, Ms. O'Brien Ham. We appreciate your being here.

We now turn to Joan Marsh, who is Vice President, Federal Regulatory Affairs for AT&T. We welcome you here, Ms. Marsh, and please go ahead with your testimony.

#### **STATEMENT OF JOAN MARSH**

Ms. MARSH. Thank you, sir, and thank you, Chairman Walden and Ranking Member Eshoo for inviting AT&T to join in this very important discussion today.

To quote former FCC Chairman Julius Genachowski, "This is a big deal." The 600 megahertz auction presents the next best opportunity to reallocate valuable spectrum for wireless broadband use, and could be the only one like it for years to come. But this auction is not just about new wireless allocations; it is also about critical public safety goals. There is wide agreement that the auction must generate up to \$7 billion to fund construction of the first nationwide interoperable wireless broadband public safety network. Auction revenues will also support broadcaster relocation, public safety research, next generation 911 services, and much needed deficit reduction.

The importance of these goals has been underscored by both sides of the Aisle in letters to the Commission, urging them to adopt policies that will enhance the ability of the auction to meet these critical statutory goals. We agree. But success in meeting these goals is by no means a guarantee. This is, by far, the most complex auction proceeding ever undertaken, and the Commission must persuade two different sets of auction bidders to participate in two separate but interrelated auctions.

In the face of this enormous complexity, there are a few key principles that should guide decision-making at every turn. You will be happy to hear I agree with two of the principles Ms. Ham expressed today. I would like to discuss how our one remaining principle in which there is some disagreement.

The primary principle is straightforward: allow free and open participation in the auction by all qualified bidders. This approach is the only one that will maximize auction revenues and thereby maximize the chances for an auction that achieve all of Congress' stated goals. If qualified bidders are excluded or limited in their bidding activity, less spectrum may be relinquished by broadcasters, the spectrum that is offered will sell at lower prices, and the chances of a successful auction will be diminished. Unfortunately, as always in the case of regulatory proceedings of significant import, there are some who want the Commission to gain the rules in favor of certain competitors over others. These proposals vary in their specifics, but they share a common theme: restricting AT&T and Verizon from full participation in the auction while steering spectrum to other bidders, including Sprint and T-Mobile, neither of which participated in the last major auction. These proposals are ill-advised, as they are unlawful. For starters, we believe they are unnecessary. Sprint already has, by far, the largest spectrum portfolio of any U.S. wireless provider, vastly exceeding that of both AT&T and Verizon. Indeed, given this it is by no means certain that Sprint will choose to participate in the 600 megahertz

auction. Sprint also has at its disposal substantial new capital resources from its owner, Japanese-based SoftBank to fund any future spectrum purchases it might choose to make. For its part, T-Mobile is owned by Deutsche-Telekom, one of the largest telecommunications companies in the world. It too has recently acquired substantial amounts of new spectrum, including from AT&T, Verizon, and the former Metro PCS. In fact, T-Mobile now runs ads in the marketplace claiming that its network is less congested and provides greater capacity than does AT&T's.

In short, there is no basis upon which to conclude that Sprint or T-Mobile have a greater need to win spectrum at this auction than any other bidder. More importantly, to the extent these carriers choose to participate, there is no basis to conclude that they lack the resources to bid competitively and win, absent auction rules that either make it easier or cheaper for them to do so. Conversely, restricting or limiting bidder participation will come at a heavy price. If AT&T or Verizon are restricted, or relegated to a separate shadow auction with its own set of rules, spectrum values at auction will be suppressed and revenues reduced. This result would effectively ask U.S. taxpayers to subsidize the auction, undermining the auction's revenue goals, including that of deficit reduction. Such rules could also impact the calculation that broadcasters will make in deciding whether to participate or not.

For these reasons, AT&T has urged the Commission to adhere to its statutory mandate and conduct an open and competitive auction that awards spectrum to the highest bidder. This approach is not only consistent with the law, but it would also offer the best prospect for a successful auction that meets all of Congress' goals.

My written testimony includes comments in other areas of great interest to AT&T, including the band plan, the need to get the engineering right, the efforts of the industry to find consensus, and the role unlicensed services can play in this auction. As to broadcaster participation, AT&T believes that broadcasters who come to the auction table are not selling a broadcast business. They are relinquishing their rights to 6 megahertz of spectrum, much needed for mobile wireless use. An evaluation mechanism adopted in the reverse auction should be consistent with that reality and opening prices should be set at a level that will encourage participation.

In conclusion, this auction presents enormous opportunity and risk. The stakes are as high as the issues are complex. AT&T remains confident that under the able leadership of Chairwoman Clyburn, Commissioners Pai and Rosenworcel, and Commission staff led by Mr. Epstein, the FCC will adopt auction rules that maximize participation and prospects for a successful auction, with all the intended benefits envisioned by Congress.

Before I conclude, one comment on something Ms. Ham said. She indicated that we got a lot of our low band spectrum for free. That is incorrect. Although the 850 allocations were originally allocated to incumbents, those licenses have changed hands many times in the secondary market, and the vast majority of AT&T's portfolio of 850 spectrum was purchased in the secondary market, and I can assure you, we paid big values for that spectrum. I just wanted to correct that one fact, and I appreciate your time.

[The prepared statement of Ms. Marsh follows:]

**WRITTEN TESTIMONY OF JOAN MARSH**  
**VICE PRESIDENT, FEDERAL REGULATORY, AT&T**  
**BEFORE THE HOUSE ENERGY & COMMERCE COMMITTEE**  
**SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY**  
**ON**  
**OVERSIGHT OF INCENTIVE AUCTION IMPLEMENTATION**

**JULY 23, 2013**

Thank you, Chairman Walden and Ranking Member Eshoo, for inviting AT&T to join in the discussion today.

To quote former FCC Chairman Julius Genachowski, “this is a big deal.”<sup>1</sup> Spectrum is the lifeblood of the mobile revolution, but with exploding bandwidth consumption, the United States faces a looming spectrum crisis. “[V]irtually every expert confirms the vital need to free up new spectrum, because demand is rapidly exceeding supply.”<sup>2</sup> This auction presents the next, best opportunity to achieve that goal, and the only one like it for years to come. Its success is critical to ensuring that sufficient bandwidth is available to sustain the United States’ world leadership in mobile broadband services and to fueling the continued virtuous cycle of investment, innovation, and jobs creation that have resulted from that status.

But as crucial as it is, this auction is not just about freeing up spectrum to keep the United States on the cutting edge of the mobile broadband revolution. It is also about public safety. In passing, the Middle Tax Relief and Job Creation Act of 2012<sup>3</sup> Congress included a list of

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<sup>1</sup> Statement of Julius Genachowski , Incentive Auction Notice of Proposed Rulemaking, Oct. 2, 2012.

<sup>2</sup> *Id.*

<sup>3</sup> P.L. 112-96 (Feb.22, 2012)

priorities, with specific dollar amounts, where the funds raised by the auctions must be allocated. For example, the auction is expected to generate up to \$7 billion to fund construction of the first nationwide, interoperable, wireless broadband public safety network, a recommendation of the 9/11 Commission that has yet to be implemented. And the auction is expected to generate specific additional revenues to support public safety research, support for next generation 911 services, and deficit reduction.

The importance of these goals was underscored in a letter sent just last week by Chairman Dingell and seven other Members urging the Commission “not to adopt policies... that will jeopardize the ability of the auction to generate winning bids that are sufficient to fund each of these important public policy goals.

But success in achieving these goals is by no means a guarantee. This is by far the most complex set of spectrum auctions ever held by any country. Unlike past auctions, where the Commission simply defines the frequency blocks it commits to clear and solicits bids for those blocks, the Commission must persuade two different sets of auction bidders to participate in two separate auctions designed to create forward-auction revenues that exceed winning reverse-auction bids by an amount sufficient to meet the overall objectives of the auction.

In the face of this enormous complexity, there are certain basic principles that should guide Commission decision-making to help ensure a successful outcome. I’d like to discuss a few of the most important principles today. Notably, both relate directly to what must be the central guiding force as the FCC devises auction rules – ensuring the revenues needed for a successful auction.

**Auction Participation**

The first principle is straightforward: allowing unfettered participation in the auction by all qualified bidders will maximize auction revenues and thereby maximize the chances for a successful auction that addresses all of Congress' stated goals. Conversely, if qualified bidders who might place the highest value on certain spectrum blocks are excluded from bidding for them, that spectrum will sell for a lower price, reducing auction revenues and diminishing chances for a successful auction. Chairman Dingell and the other signators of last week's letter recognized this common sense principle and accordingly urged the Commission to "adopt transparent and simple rules to encourage participation by the broadest possible group of broadcasters and wireless providers because doing so will contribute in great part to a successful auction that, in turn, will generate the revenues needed to fulfill our shared commitment to public safety and achieve the other goals of the Act."

Unfortunately, as is always the case in regulatory proceedings of significant import, there are some who want the Commission to game the rules to favor certain competitors over others. These proposals vary in their specifics but they share a common thread: restricting or preventing AT&T and Verizon from participating in the spectrum auction, while steering spectrum to others, in particular, Sprint and T-Mobile.

These proposals are as ill-advised as they are unlawful. For starters, they are unnecessary. Sprint already has by far the largest spectrum portfolio of any U.S. wireless provider, vastly exceeding that of both AT&T and Verizon Wireless, despite having fewer subscribers. Indeed, a report issued by Deutsche Bank just last week noted that "Sprint has more spectrum free-and-clear to deploy LTE than [AT&T, Verizon, and T-Mobile] combined" and

concluded that Sprint is thereby positioned “to deploy the highest capacity (and potentially highest speed) LTE network in the US.”<sup>4</sup>

In addition to having the deepest spectrum position in the industry, Sprint also has at its disposal a substantial cash infusion from its new owner, Japan-based Softbank, as well as Softbank’s considerable resources to fund any spectrum purchases it might choose to make at the 600 MHz auction. Indeed, given the spectrum it already has at hand, it is by no means a given that Sprint even will choose to invest substantial resources at the upcoming 600 MHz auction.

For its part, T-Mobile is owned by Deutsche Telekom, one of the largest telecommunications companies in the world; and it has recently acquired substantial amounts of spectrum from AT&T, Verizon Wireless, and the former MetroPCS. T-Mobile recently has been running ads claiming that its network is less congested than AT&T’s.

The salient point here is that there is no basis upon which to conclude that Sprint and T-Mobile have a greater need for spectrum resources at this auction than other providers, including AT&T. Nor, more importantly, is there any basis for concluding that, to the extent these carriers choose to participate in the auction, they lack the resources to bid competitively without regulatory favors that make it easier and cheaper for them to do so. To the contrary, in the

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<sup>4</sup> See Deutsche Bank Markets Research, Sprint Nextel Corp., The New Spectrum Powerhouse: Reinstating Coverage at Buy (July 11, 2013) attached to the July 17, 2013 Ex Parte filed by Verizon “Expanding the Economic and Innovation Opportunities of Spectrum through Incentive Auctions, GN Docket No. 12-268; Policies Regarding Mobile Spectrum Holdings, WT Docket No. 12-269.” The filing is available at <http://apps.fcc.gov/ecfs/document/view?id=7520931273>

AWS-1 auction, among a field of 168 bidders, T-Mobile emerged as the top winner of spectrum, without any rules that handicapped the other bidders. Neither Sprint nor T-Mobile won spectrum at the FCC's 700 MHz auction but that is because they chose not to participate. As Chairmen Upton, Chairman Walden, Chairman Whitfield, Vice Chairman Blackburn, Vice Chairman Latta and Representative Long aptly put it, in an April 19 letter to the FCC, if "the highest use value of the spectrum would come from rivals to [AT&T and Verizon], those rivals should be able to raise the capital needed to win the licenses at auction."<sup>5</sup>

But restrictions on the ability of AT&T and Verizon to participate in the auction are not merely unnecessary and unwarranted. They also will necessarily drive down the price paid by others, thereby reducing auction revenues. Such restrictions would thus effectively force US taxpayers in effect to subsidize the spectrum purchases by those other carriers, a perverse result for sure in this time of massive deficits, spending cuts, and debates about possible tax increases. Moreover, those reduced revenues would artificially constrain the amount of spectrum freed up at the auction, as well as jeopardize funding for the public safety network, E911, and the anticipated reduction in the national debt. Indeed, they could suppress auction bidding to such a degree that the auction would fail altogether.

Accordingly, AT&T urges the Commission to adhere to its statutory mandate and conduct an open and competitive auction that awards spectrum to the highest bidder. That approach not only would comply with the law, but would also offer the best prospect for a successful auction that meets all of Congress' stated goals.

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<sup>5</sup> See April 19, 2013 letter to the FCC from Chairman Upton, Chairman Walden, Chairman Whitfield, Vice Chairman Blackburn, Vice Chairman Latta; and Representative Long at 3.

**The Band Plan**

The second principle that should guide FCC decision making is that maximizing the utility of the spectrum to be auctioned will maximize revenues and chances for success. Simply put, the better the band plan addresses interference and technical challenges, the more the spectrum will be worth to wireless carriers. From AT&T's perspective, the guiding principle must be to get the engineering right.

Understanding the importance of this principle, a broad array of wireless carriers, broadcasters, and equipment vendors have reached a consensus supporting a particular band-plan framework that retains some key characteristics of the FCC proposal, but modifies some others. AT&T participated in this coalition and believes this consensus approach strikes the best balance between addressing interference challenges and meeting the other goals of the proposed auction. We also believe that, given the extensive support for this approach in the Commission's record, the Commission should focus on resolving any remaining differences on how this framework should be implemented and seek to finalize a band plan for the auction this year.

In that regard, AT&T believes that unlicensed services can and should be permitted in appropriate portions of the 600 MHz band, but only if prospective providers of such services can demonstrate that their operations will not cause harmful interference to licensed commercial wireless services. It would make no sense to build a technically strong band plan, only to undermine it by permitting unlicensed uses that introduce new interference challenges. This would devalue the spectrum for auction and suppress auction revenues.

Finally, a word about broadcaster participation. Broadcasters who come to the auction table are not selling a broadcast business. They are relinquishing their rights to 6 MHz of spectrum much needed for mobile wireless use. Any valuation mechanism adopted in the reverse auction should be consistent with that reality and opening prices should be set at a level that will encourage participation. The two-sided nature of the auction will discipline pricing once the auction is underway.

**Conclusion**

This auction presents enormous opportunity and risk. The stakes are as high as the issues are complex. AT&T has every hope that, under the able leadership of Chairwoman Clyburn, Commissioners Pai and Rosenworcel, and Commission Staff, the FCC will devise auction rules that maximize prospects for a successful auction with all the attendant benefits Congress envisioned.

Mr. WALDEN. Thank you, Ms. Marsh. We appreciate your testimony.

Now we will go to the question phase, so again, we want to thank you all for your testimony today, and your counsel.

Mr. Epstein, although ineligible to participate in the auction, low power translators play a unique role in the States, especially in the mountain West where thousands of viewers rely exclusively on translators for news and weather and emergency information. Is the FCC considering auction rules and repacking procedures that will minimize the negative impacts the auction will have on TV translators and low power TV where possible?

Mr. EPSTEIN. Mr. Chairman, Commission in its notice recognized the public interest concerns that you just stated. The Congress made the decision not to include low power and translators in the incentive auction, but it doesn't mean that they are not highly valued—

Mr. WALDEN. Right.

Mr. EPSTEIN [continuing]. Aspects and yes, in considering the repacking and other aspects of the incentive auction, that translators—we asked specific questions about translators and low power.

One other point that I would like to quickly make—

Mr. WALDEN. Yes, sir.

Mr. EPSTEIN [continuing]. And that is that in our—and this may be a misapprehension on some people's part. In any of our band plan deliberations, what we are seeking to do is to have a core amount of spectrum across most of the United States. There may be some areas which are impaired because of issues which I am sure we will discuss, but in rural areas, we are not seeking to eke out the last amount of spectrum, and that is especially in recognition of the issue you just stated.

Mr. WALDEN. I appreciate that. Thank you.

Again, Mr. Epstein and Mr. Kaplan, the Spectrum Act requires the FCC to follow the methodology in OET Bulletin 69 when repacking the broadcast band. But the FCC has released multiple public notices on changes to the software and inputs it intends to use to run the repacking analysis, including the use of new data and assumptions. Mr. Kaplan, do you believe that the proposed changes to the OET 69 software comport with the Act, and Mr. Epstein, why are those changes necessary?

Mr. KAPLAN. I believe the changes now on the fourth round of changes as of last night are both unlawful and unwise.

Mr. WALDEN. OK. Mr. Epstein, do you have a different view of that?

Mr. EPSTEIN. Yes, I do. I have a different view.

Mr. WALDEN. I figured as much.

Mr. EPSTEIN. Statute requires us to maintain the methodology utilized in OET 69. We believe we are maintaining the methodology. What we are looking at is updating the inputs. We are doing such things as using 2010 census instead of 2000 census. It seems to make a lot of sense to us to update the inputs to the software. The original software is just not capable of operating with the incentive auction—

Mr. WALDEN. So you are making changes in the methodology?

Mr. EPSTEIN. We are not.

Mr. WALDEN. OK. Mr. Kaplan, why do you think these are unwise, illegal, and whatever else you said?

Mr. KAPLAN. Well when I worked at the FCC, when Congress told us to do something, we did it. Those were the easiest times, when it was clear. Congress made it very clear as to what the FCC should do. There was a very simple methodology—actually very complicated for most of us, but for engineers, very simple—about how to go about calculating our coverage areas. Congress was wise to not allow the FCC to move the goalpost, mostly to create certainty, which you talked about in your opening statement, about what broadcasters will participate, what won't and where we might cover. As we did our analysis on the changes that are occurring in OET 69, they become widely inaccurate. We get different results each run we do, and they surprisingly—or unsurprisingly—shrink our coverage areas quite a bit in certain areas of the country. And so therefore, we think it runs far afoul of what Congress intended.

Mr. WALDEN. All right. We will follow up on this discussion.

Mr. Epstein, the FCC staff has taken the unusual step of freezing not only new but also pending applications by TV stations to modify their viewing areas. Some of these modifications have been pending for years. These mods will allow broadcasters that wish to remain on the air to bring local news emergency information to a larger audience in local markets. Is the Commission considering any kind of analysis to determine whether some can be granted without disrupting the incentive auction? And Mr. Kaplan, do you know of an approach that would prevent the mods from making the repacking process more difficult?

Mr. EPSTEIN. Mr. Chairman, yes we are analyzing the station applications that are pending. Just two sentences worth of background. You and Congress and the statutes set a specific date for applications to be considered in the repacking. These applications were either pending or not granted by that date. The FCC found in its notice it had the discretion to grant them, but put a temporary freeze in place so we can analyze them.

Mr. WALDEN. But you are in that process?

Mr. EPSTEIN. We are in that process.

Mr. WALDEN. Because I would think there would be some markets as you described where—

Mr. EPSTEIN. We have also—

Mr. WALDEN [continuing]. You would get into a problem.

Mr. EPSTEIN. We have also put in place a waiver request for particular hardship. So the answer to your question is yes, we are analyzing those stations.

Mr. WALDEN. Mr. Kaplan, do you care to comment?

Mr. KAPLAN. Any time you freeze—and this goes for any industry—you freeze an industry from acting, you freeze investment and you freeze any outside investment, especially in that industry. And that is what is going on right now in the broadcast industry. We have actually proposed another solution, perhaps, that we hope the FCC would adopt, which is, I think—and everyone can agree might help the process in general, which is to move forward on this portion of the incentive auction order, and not wait for issues like band plan, competition, other things, but actually adopt an order

making the decisions that are—of things that are proposed in the notice of proposed rulemaking on these issues. Therefore, you won't have a need for a freeze because you will—the FCC will then have decided where they come down on what stations are protected and what stations aren't, and we would fully support that.

Mr. WALDEN. Mr. Epstein, did you want to comment?

Mr. EPSTEIN. Just briefly. This is an overriding comment. Anything that I say with respect to recommendations ultimately has to be acted on by the Commission.

Mr. WALDEN. Sure.

Mr. EPSTEIN. What the staff does is make recommendations to the Commission, and the Commission is the actual decision maker here. We are analyzing stations. What we are concerned about is in the process, and a complicated process like the incentive auction, we don't want to get ahead of ourselves and make decisions which we may regret later, which will completely—which will significantly affect our repacking. So we are doing exactly as Mr. Kaplan said. We are trying to determine whether these stations will have any effect on repacking.

Mr. WALDEN. All right. I appreciate your answers to my questions.

We will now turn to the gentlelady from California, the Ranking Member, Ms. Eshoo, for questions.

Ms. ESHOO. Thank you, Mr. Chairman, and thank you to each one of you. I think that this is not only a very important panel, but your testimony is—I mean, we are hanging on every word that each one of you are saying. Obviously there are differences between you.

I want to go to Ms. Marsh first. There is something that is really bothering me about this is as Mr. Waxman said, a straw man being set up, that there are those that want to exclude or seeking to have AT&T and Verizon excluded from this process. There isn't anyone that has suggested that. I haven't found that. I have tried Googling it. I have asked my staff to research it. There isn't anyone that has suggested that or is for that. I think I heard a suggestion that if it isn't—if this isn't set up the way you want it, that AT&T is simply not going to participate, which I think is a threat that unless it goes exactly the way you want it, the entire auction is going to fail, that we won't be able to reduce the deficit, we won't produce the dollars for the interoperable nationwide public safety network, and the auction won't be successful. Are you actually stating that if you don't get your way that you are just not going to participate?

Ms. MARSH. No, ma'am, and I apologize if I suggested that. I certainly did not suggest that AT&T will not participate. But we do believe if there are limitations imposed, even if they are not exclusions by name, they could act to exclude—

Ms. ESHOO. So let me just ask you this. If, in fact, there is not room for competition by smaller carriers, you think that the auction will fail?

Ms. MARSH. No, I believe that the auction can be set up so there is room for all bidders to come and win, and that is exactly what we have seen in the last two major auctions at the FCC.

Ms. ESHOO. So how, Ms. Ham, does that—I think she just said something that may please you.

Ms. HAM. Yes. Well, we are in favor of broad participation, yes. I used to run the spectrum auctions program at the FCC, and I ran the early PCS auctions and I saw what a successful auction looked like. Successful auction is one where you have a lot of bidders bidding in a lot of markets, OK? That is what T-Mobile would like to see in this auction. That is what we think will be accomplished with reasonable spectrum aggregation limits. As you indicated, we and others are not saying exclude AT&T and Verizon. What we are worried about—and bear in mind, we are not even sure how much spectrum there is going to be in this auction. It all really depends on what broadcasters show up.

Ms. ESHOO. Voluntary, right.

Ms. HAM. And if there is less spectrum here, there is a much greater likelihood that AT&T and Verizon can divide and conquer, OK? So to Harold's No Piggies Rule, I think that is what we are talking about.

Ms. ESHOO. I was waiting for someone to bring that up on the panel.

Ms. HAM. I think what we are talking about—but anyway, it is ensuring that there is competition after this auction. The FCC hasn't run an auction in 5 years. This is the most important auction that they have run since the PCS auctions. Back then, there was a duopoly. There was a cellular duopoly, and guess what the Commission did? The Commission put in place reasonable aggregation limits. T-Mobile stands here today as a competitor because of that good policy. That is what we are for.

Ms. ESHOO. Thank you.

Mr. Epstein, this is just a curiosity question. Do you think that the FCC will meet its goal of holding the auction in 2014?

Mr. EPSTEIN. What our charges from Chairwoman Clyburn is for the staff to do whatever it can to place the options before the Commission to adopt a report and order in 2013 and to hold the auction in 2014. That is what we plan and intend to do.

Ms. ESHOO. You have confidence that it can happen in 2014, though?

Mr. EPSTEIN. Whether it happens in 2014 I guess is above my pay grade, but we will do everything we can to empower the Commission to make that decision and to hold the auction.

Ms. ESHOO. You are a wonderful diplomat.

I think everyone in this room knows that—how strongly I feel about unlicensed spectrum, you know, the fight to get that into the spectrum bill. I think a real victory for the country that we did, and that we continue on that path to not only protect it, but enlarge it. In 2011, the Stanford Institute for Economic Policy Research—it is known at home as SIEPR—it is a very important organization at Stanford. It looked at the economic benefits of unlicensed and concluded that making more of it available would “likely add significantly to government revenue and could result in higher auction revenue than if all new bandwidth were sold under exclusive licenses.” Mr. Feld, do you agree with that assessment?

Mr. FELD. Absolutely. We have seen historically every time that we have, you know, added more unlicensed spectrum and made that more available, it has just led to a fantastic boom in new services and new devices that product exciting new economic opportuni-

ties. '99—in '89, rather, when we first went to garage door openers; in '97 we opened up the UNII band which laid the ground work for Wi-Fi and all of the innovations that that has brought. With TV white spaces in only the short time that it has actually been available for us to certify equipment, we have got a huge backlog of orders among WISPs. We are seeing other countries in Europe, we are seeing Kenya and South Africa, New Zealand all looking at this technology with pilot projects popping up all over the world. This is just a fantastic engine of not just innovation, but also of economic opportunity and growth.

Ms. ESHOO. Thank you very much.

I have other questions, Mr. Chairman, but I will submit them to the witnesses. Is there a timeframe in which witnesses need to respond to us when we submit questions to them? I don't know the answer to that one.

Mr. WALDEN. Ten days.

Ms. ESHOO. Ten days? Good. OK, thank you very much.

Mr. WALDEN. The lady's time is expired, and the chair recognizes the lady from Tennessee, the vice chairlady, Representative Blackburn for 5 minutes.

Mrs. BLACKBURN. Thank you, Mr. Chairman. Again, I thank you all for being here. I have to tell you, it is interesting to hear such a spirited conversation, and I think that we all appreciate this. I hope we are all focused on the same goal, and that is getting this spectrum out to the marketplace so that we don't end up with a spectrum crisis.

Ms. HAM, I want to come to you because I know that you all have been running an ad that claims that your network is less congested than AT&T's. And then I saw a Deutsche Bank financial statement that said Sprint is the new spectrum powerhouse and has more spectrum for LTE than all of its competitors combined. And then you are talking about AT&T being excluded. So if your ads are true, why would you not want AT&T in the spectrum auctions?

Ms. HAM. Well again, to clarify, we are not talking about excluding them. In fact, it helps us to have AT&T and Verizon in our neighborhood, OK? I mean, we were the leaders of building out AWS spectrum. We did that alone, OK? It helps to have your competitors out there buying from vendors, et cetera, et cetera. It brings down the costs so we want them in the neighborhood, OK? That is not what this is about. And you know, in terms of our ads, none of those ads—I mean, T-Mobile, going back 18 months I think I referenced since our deal, so we got some spectrum from AT&T as part of that deal, OK? We got some spectrum from Verizon as part of the Verizon spectrum co-deal, and we recently merged with Metro PCS. So we are in a stronger position than we were 18 months ago—

Mrs. BLACKBURN. Let me ask you this, then.

Ms. HAM [continuing]. With upper band spectrum.

Mrs. BLACKBURN. OK. Then if the sub-1 gigahertz spectrum is so important, then why did T-Mobile—why didn't they even participate in the 700 megahertz auction?

Ms. HAM. Sure, thank you. Well first of all, with all due respect, I think we have to take the market as it is today, not as it was

in 2006. The market has changed dramatically since then. There were barely even smartphones back in 2007. T-Mobile did participate in the 2006 auction, and we very aggressively built that spectrum out. That spectrum was encumbered with 22 federal agencies, OK? We were deep in the throes of that and I know we visited a lot of your offices during that time about that issue, because clearing the Department of Justice and the Department of Defense is no easy job, OK?

So the other thing I would say is we have to take the spectrum in the order we get it, OK? The 700 megahertz auction came after the AWS auction. At the time the AWS auction occurred, T-Mobile was hot to trot to get our 3G spectrum so we could compete with these guys, OK? That was the spectrum that was on the auction block. We put our resources into it and we put our resources into clearing it. And today, we are using that spectrum. We are probably using it the most of anybody. That is our LTE spectrum. So T-Mobile knows how to get its spectrum and use its spectrum, but we don't have any low band spectrum, and low band spectrum is what this auction is about.

Mrs. BLACKBURN. OK. Now Mr. Feld has his hand up and I am going to recognize him, even though he has a No Piggies Rule and he is trying to hog the time. So Mr. Feld, I am going to recognize you for your comments, but then also in your written testimony, you were comparing the auction if AT&T and Verizon were in it, it would be akin to the Boston Celtics trying to play an amateur team. I am not certain, I think your testimony is a little exaggerated there. You know, ask your question, but then I also want to hear you respond, why do you have so little faith in these wireless providers?

Mr. FELD. Well first of all, let me say I cannot help but think fondly and nostalgically of the '85-'86 Celtics, but that is just a product of growing up in Boston. The issue I just wished to raise was there were many other competitors comparable to T-Mobile and Sprint who—both of whom were going through their own internal spectrum issues, T-Mobile buying and clearing AWS, Sprint and the rather horrific 800 megahertz rebanding, that participated. They all got beat. Alltel came out with nothing. They had not choice but essentially to exit the field after they came up empty. Leap came up empty. Metro PCS came up practically empty. All of these players came in because when push came to shove, Verizon and AT&T were able to bring the most resources to bear on the licenses that they wanted to have, and nobody else could hope to outbid them. You know, that is what happened in 700 megahertz, and if T-Mobile had been there, they would have gone the same way as Alltel.

Mrs. BLACKBURN. My time has expired, but I will just mention for the record, I read a Citibank report in preparation for this, and I think that Verizon now has less spectrum per million post-paid subscribers than any of you at the table. And so as we—I think we need to be careful about talking about trying to keep people out or restricting the auctions, and I yield back.

Mr. WALDEN. The gentlelady yields back, and at this time the chair recognizes the gentleman from California, the ranking member of the full committee, Mr. Waxman, for 5 minutes.

Mr. WAXMAN. Thank you very much, Mr. Chairman.

As I said in my opening statement, Congress enacted this law, the Public Safety Inspector MACT, with multiple goals in mind. These goals include using auction revenue to fund multiple priorities, such as the creation of a nationwide public safety broadband and network known as FirstNet, as well as ensuring that the wireless marketplace remains competitive after the auction closes. These goals are not mutually exclusive. I would rather just ask the panelists, I can ask you all answer affirmative, but do any of you think that the FCC is not capable of conducting an auction that advances both of these critical goals? Seeing no one responding, then I will accept—

Ms. HAM. They are absolutely capable of doing that.

Mr. WAXMAN. OK, thank you.

Now I would like to ask a hypothetical question. It is a simple hypothetical of our panelists. Let's assume that the incentive auction clears enough spectrum for the FCC to make available for sale seven paired spectrum licenses at every market throughout the United States. Should the FCC allow any one bidder to acquire all seven licenses available in a market? Maybe get a yes or no. Mr. Feld?

Mr. FELD. No, certainly not.

Mr. WAXMAN. And Mr. Epstein, do you want to answer that?

Mr. EPSTEIN. Whatever diplomatic skills I exercised with Ranking Member Eshoo I would like to exercise again, because we are the initial decision makers on that issue.

Mr. WAXMAN. Well I wanted a yes or no, so if you don't feel you can do a yes or no, maybe because we are asking about the FCC I will ask the other panelists.

Mr. Kaplan, yes or no?

Mr. KAPLAN. It is not an issue that NAB has taken a position on, but I don't believe anyone on this panel will answer that question yes, I think that only one bidder should win. I don't think anyone has answered that.

Mr. WAXMAN. OK, Mr. Padden?

Mr. PADDEN. Congress has asked a great deal of this one small proceeding, and that is to convince enough broadcasters to come in and volunteer their spectrum to raise enough money to—

Mr. WAXMAN. But should the FCC allow, under my hypothetical, any one bidder to acquire all seven licenses, if that is what we have available, in the market?

Mr. PADDEN. We believe the priority has to be to maximize the revenue in this market—in this auction to achieve the public interest goals Congress has set, including funding FirstNet.

Mr. WAXMAN. So you think that FCC should allow it if it backs—

Mr. PADDEN. We would defer to the market forces of the auction to determine the outcome.

Mr. WAXMAN. Ms. Ham?

Ms. HAM. No, I don't think any one bidder should acquire all of it, and I think you can have a healthy competition and maximize the revenue.

Mr. WAXMAN. Ms. Marsh?

Ms. MARSH. I think that it is highly unlikely, if you look at prior auctions, that that would ever happen. We have always had a diversity of winners, even when auctions were open and free to all participants, and as a backstop to that, the FCC would always retain its general authority over spectrum aggregation. AT&T has never suggested that general authority would not continue to exist.

Mr. WAXMAN. OK, thank you.

Let me ask this to Mr. Feld and Ms. Ham. When Congress first granted the FCC the authority to conduct spectrum auctions in 1993, the law included specific instructions about what the Commission must consider to protect the public interest. Under Section 309(j) of the Communications Act, the FCC is required to promote “economic opportunity and competition” and ensure that “new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants.” Furthermore, statute prohibits the FCC to base a public interest finding solely or predominantly on the expectation of revenues from an auction. Mr. Feld, Ms. Ham, do you think these provisions are equally valid today?

Mr. FELD. Absolutely. In fact, the Spectrum Act of 2012 explicitly states in Section 6043(i) that nothing in this subsection shall be construed to expand or contract the authority of the Commission, except as otherwise expressly provided. Those provisions remain. They were not explicitly addressed. What was addressed was a methodology in which Congress said the rule by which you implement those things is to say you can’t—it must be a rule of general applicability, which is what the Commission has before it today, and those remain not only legal, but we would argue under the statutes that you have cited, necessary.

Mr. WAXMAN. Ms. Ham, you were there in the original auction.

Ms. HAM. Yes, I was there. No, I think those provisions are very wise and valid, and as I indicated before, it is the reason why T-Mobile exists today and the reason why billions have been invested into this industry and millions of jobs have been created since that law was enacted. So yes, I think it is wise and it is good public policy.

Mr. WAXMAN. I want to conclude by asking Mr. Feld, as you know, the Department of Justice filed a letter with the FCC earlier this year in support of its spectrum aggregation rules. The Department expressed concern that the dominant wireless incumbents may have the incentive to pay foreclosure value to acquire spectrum licenses for the purpose of blocking competition and preventing rivals from improving their competitive position through the acquisition of better spectrum. An article in the Wall Street Journal recently suggested that AT&T’s proposal to acquire Leap Wireless is evidence that foreclosure might be a real concern, given that AT&T is willing to spend more than eight times Leap’s 2013 earnings to acquire the carrier. Do you think that the DOJ was correct to raise this concern with the FCC?

Mr. FELD. I absolutely think the DOJ was correct, particularly with regard to the low band spectrum, because this is all there is. There is no spectrum fracking that we can use to get low band spectrum out of spectrum shale. There are no new spectrum mines

that could be open now that the price of low band spectrum has become more valuable. This is our last chance to get low band spectrum into the hands of competitors, and therefore there is every incentive for those companies that could block competitors from getting it to do so. Verizon is advertising its low band spectrum on its LTE network. To borrow Ms. Blackburn's proof, they are advertising that you can get better reception in the woods on a Verizon system using 700 megahertz low band spectrum. That is really valuable stuff that they expect even the consumers who don't know what a megahertz is to understand. It is incredibly valuable and we need to make sure that competitors have some.

Ms. MARSH. Can I respond on the foreclosure point?

Mr. WAXMAN. It is up to the chairman, but I certainly would want you to be able to.

Mr. WALDEN. Well, the gentleman's time has expired, but if you could make it very, very brief.

Ms. MARSH. Yes, the foreclosure point is fully addressed by the FCC's build requirements. The FCC today and in the prior auction and all transactions have very stringent build requirements that require any licensee that acquires spectrum to build it in very specific timeframes, or face significant consequences. We think that that completely eliminates any potential threat of buying spectrum simply to foreclose competitors.

Mr. WAXMAN. Thank you. Thank you very much, Mr. Chairman.

Mr. WALDEN. Thank you very much. The gentleman's time has expired, and yields it back. At this time, the chair recognizes himself for 5 minutes. Again, I want to thank all the witnesses for your testimony today. I think it is another outstanding panel that we have here today.

Let me just start, Mr. Kaplan, with some of your testimony that you gave today, and if I can just get a little more comment on this. I just read a little bit from page 7 you were talking about in February of this year that the FCC's staff presented what the FCC staff believed to be the seven key components of the voluntary broadcast incentive auction, and you list those seven. But then you say this: this list is remarkable for the fact that almost a year and a half after passage of the Spectrum Act, the affected industries still have no clear idea how and when the FCC plans to address these key components. Would you care to comment on that?

Mr. KAPLAN. Sure, thank you. One concern we have is transparency, and not just transparency for transparency's sake, but transparency and engagement, and that means, on the list of seven that is there, aside from the first one which actually was mandated by Congress, the options that were available to the FCC for participation by broadcasters, but is bringing people together. And actually, we had a very nice conversation before this hearing, so thank you for bringing this panel together, because I think we have already accomplished some things before the hearing—to work together prior to things coming out to figure out how we, I guess to quote Jerry Maguire, how we can help you. So in other words, we would love to be of assistance, as I know T-Mobile and AT&T, Harold, Preston, to the Commission, but understanding where they are in the process is enormously important, because otherwise, we are shooting in the dark. So all of our comments about transparency

are about transparency and engagement. And to Ms. Eshoo's point before about the auction in 2014, to get that done, we all need to be engaged. We are ready to do it. We want to do it expeditiously, but not knowing where things stand and then finding out, let's say, the night before a hearing where we might be and then trying to figure out things really quickly is not necessarily a recipe for success. So we are ready to do it, but I think transparency and engagement are central.

Mr. WALDEN. Thank you very much. Mr. Epstein, I know this is an issue that is very important to both Chairman Emeritus Dingell and to me because of our districts, where we are located. Mr. Dingell's being in Michigan and mine being in northwest Ohio, and of course, with Ontario being our next-door neighbor. Has there been further progress on coordination of efforts on setting a timeline in getting things worked out on international agreements with the Canadians, especially when we are looking at the whole issue of spectrum and we are looking at trying to get that completed prior to or after? What is it looking like right now at the FCC?

Mr. EPSTEIN. Yes, Mr. Chairman, if you would indulge me for a moment, I would like to respond to Mr. Kaplan. I can either do that now or—

Mr. WALDEN. Go ahead.

Mr. EPSTEIN. OK. Just very briefly, I think I agree with the need for transparency and engagement. I do slightly disagree with what the Commission has done over the last year. There have been, you know, four workshops, there have been public notices that have come out, there are 460 comments that have been filed. I have actually—of all of the panel members that are here, I think the NAB has been in more than 15 times to have meetings with the Commission's staff. We welcome their engagement and we welcome the engagement of everybody on this panel. If we can do better, we will do better with respect to that. But I think that is a crucial and important part of the incentive auction process.

With respect to the question about border issues, we agree that it is important to allow us to do as much as we can to reach agreements with Canada and Mexico to allow us to repack, to allow us to reclaim more spectrum in the border areas. We intend, of course, to follow the statutory requirement to coordinate with Canada and Mexico. We are committed to advancing the process. We are working very closely, both with the International Bureau and the Department of State. Staff level meetings have been held for at least the last 4 or 5 months on technical matters. Chairwoman Clyburn places this at the highest priority level. She is traveling to Canada this Thursday and has asked me to accompany her to engage in further high level discussions in order to attempt to reach agreements. What we intend to do by the time of the auction is to advance the process sufficiently to provide as much certainty as possible.

It is not a different or all that unusual problem with respect to spectrum discussions and negotiations. In almost all of the auctions, like the 700 megahertz auction, the analog to digital transition, we have had similar issues and have had similar successes.

Mr. WALDEN. Thank you very much, and my time has expired, and the chair at this time recognizes the gentleman from Michigan, Chairman Emeritus Mr. Dingell, for 5 minutes.

Mr. DINGELL. Mr. Chairman, I thank you for your kindness.

As you know, I am strongly interested in seeing that the incentive auctions authorized by the Middle Class Tax Relief and Job Creation Act of 2012 proceeds in a fair and transparent manner. With respect to the reverse auction, broadcasters should be treated fairly, and I will do my level best to ensure that the Commission takes no action that would deprive constituents in border areas of free over-the-air television. Concerning the forward auction, the Commission should implement simple rules in a transparent manner that allows the greatest number of parties to bid on reclaimed broadcaster frequencies. As the representative of the Act's implementer, I will be most interested to hear Mr. Epstein's response. Consequently, my questions this morning will be directed at him. They will require only a yes or no.

Mr. Epstein, I want to begin with the reverse auction. Section 6403(b)(1) of the Act specifies that the Commission may, subject to international coordination along the border with Mexico and Canada, reassigned and reallocate broadcast frequencies. Is that correct?

Mr. EPSTEIN. Yes.

Mr. DINGELL. Mr. Epstein, in the Commission's July 2, 2013, response to my letter of inquiry about the reverse auction, you made the following statement. The language used in Section 6403(b)(1) of the Act is, and I quote, "identical to that used by the Commission in describing its handling of the earlier DTV transition, in which the Commission adopted our proposed allotments for these stations, subject to our continuing negotiations with Canada, notwithstanding the broadcasters' request to the contrary." One could reasonably assume that based on that statement, that the Commission may assign and reallocate broadcast frequencies pursuant to the Act while negotiations with Canada and Mexico are still ongoing. Is that correct?

Mr. EPSTEIN. Yes.

Mr. DINGELL. Is that going to happen?

Mr. EPSTEIN. As I stated in response to the prior question that we are doing everything we can to provide as much certainty as we can—

Mr. DINGELL. My people are not feeling much certainty on this matter, and I would remind you that this is subject to very intense discussions, or should be, between the United States, Mexico, and Canada in order to ensure that the services to our people up there do not go dark.

Is it correct that the Commission has not yet finalized its order to implement Section 6403 of the Act, yes or no?

Mr. EPSTEIN. Yes.

Mr. DINGELL. In that case, Mr. Epstein, I would urge that the Commission in its final order not to reassign or reallocate the broadcast frequencies until it has concluded negotiations with Mexico and Canada. As I noted earlier, my constituents live in a border region and stand to see television stations go dark if the Commission doesn't get this right. For their sake, I prefer you measure twice and cut once when it comes to broadcast repackaging.

Now Mr. Epstein, I would like to turn my attention to the forward auction. I note that the Commission has had a proceeding pending on its spectrum screen since September, 2012. Does the Commission intend to complete this proceeding before releasing new rules for the forward auction authorized by Section 6403(c) of the Act? Yes or no?

Mr. EPSTEIN. Congressman, that is above my pay grade. The schedule for the Commission acting on this order is something that the Commission will take up. What I do know is that the Commission has expressed a desire to provide clarity before the incentive auction goes forward.

Mr. DINGELL. You are comforting me but only slightly.

Now, Mr. Epstein, Section 6403(c) contains an interesting subparagraph which provides that the Commission may not grant licenses through the forward auction, reassign or reallocate broadcast frequencies, or will revoke spectrum usage rights unless it proceeds—unless the proceeds of the former—forward auction are greater than the following three factors combined: those factors are the total amount of compensation that the Commission must pay successful bidders in the reverse auction; the costs of conducting a forward auction; and the estimated costs for the Commission to pay for broadcaster reallocations. In addition, it is in the public interest that the Commission ensure that the auction raises a significant amount of money in order to help fund the build-out of FirstNet. Together, these constitute significant pressure on the Commission to maximize the auction's revenue, do they not? Yes or no?

Mr. EPSTEIN. Yes, it does. Yes.

Mr. DINGELL. OK. Now Mr. Epstein, to that effect, will the Commission adopt transparent and simple rules to encourage participation by the broadest group of wireless providers in the forward auction? Yes or no?

Mr. EPSTEIN. Yes.

Mr. DINGELL. Now I would like to ask unanimous consent, Mr. Chairman, that the July 16 letter sent by Mrs. Engel, Butterfield, Green, Braley, Matheson, Barrow, Tonko and I to the Commission about the forward auction as well as any response that the Commission may tend or may care to send to be included in the record.

[The information appears at the conclusion of the hearing.]

Mr. DINGELL. The entire incentive auction must be subject to rigorous and ongoing oversight in order to assure the transparency and that it achieves to Congress' intent as set forth in the Act.

I thank you for your courtesy, Mr. Chairman. Thank you, Mr. Epstein.

Mr. WALDEN. Mr. Chairman, without objection, your letter will be, and its response, entered into our record.

Mr. DINGELL. Thank you, sir.

Mr. WALDEN. Yes, sir. Now turn to gentleman from Illinois, Mr. Shimkus, for 5 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman. I think my questions are going to follow right along with Mr. Dingell's point, and I will go to Mr. Epstein.

You have studied the Spectrum Act to a sufficient degree that you and I can walk through—this is a question—through the auction revenues proceeds from the forward auction that are con-

templated by this Act, so I want to go through the sections, and you are prepared to maybe answer?

Section 6413(b)(3) we have \$7 billion for FirstNet. 6413(b)(2), \$135 million for State and local implementation funds. 6413(b)(4), \$100 million for public safety research. 6413(b)(5), \$20.4 billion for deficit reduction. We are good on the numbers so far?

Mr. EPSTEIN. Congressman, I don't have the statute in front of me, but it sounds correct, subject to my confirmation.

Mr. SHIMKUS. OK. So we have got \$115 million for Next Gen, \$200 million for wireless, \$1.75 billion for TV broadcasters' relocation. That comes to about \$28.7 billion is what is projected under the Act, I am being told. Will the auction rules that you are devising enable the production of the proceeds in this amount?

Mr. EPSTEIN. I can't predict, OK, how much money we will raise in the auction. It is a market-based auction. What our job is is to make the auction attractive and simple and get maximum broadcaster participation.

Mr. SHIMKUS. OK, let me go. If in addition to this proposed hopefully \$28.7 billion, do we also—might we also need additional proceeds to pay broadcasters who participate in the incentive auction?

Mr. EPSTEIN. The total amount of money that we will need will include the amount, of course, that we have to pay broadcasters who—

Mr. SHIMKUS. So it might be more than \$28.7?

Mr. EPSTEIN. Again, I don't have the exact numbers.

Mr. SHIMKUS. So here is the crux of the question, and it is line with the letter that the Democrats sent. Are you designing an auction that will produce only "minimum proceeds" described in the Spectrum Act, or are you trying to design an auction that reaches the goals of the Spectrum Act that we just kind of went over?

Mr. EPSTEIN. I think I—in my testimony, I talked about the four goals that were put before us by Congress, which include to maximize the amount of spectrum which is repurposed. The second goals are the fiscal goals, which are equally important, and they—I talked about the statutory requirements that are to pay the broadcasters, to pay the reimbursement, to pay our—

Mr. SHIMKUS. OK, so let me follow up, because again, there is another one I want to get to. If we impose restrictions to AT&T and Verizon, can we get these dollars?

Mr. EPSTEIN. It is an issue which is before the Commission. It is an issue you heard today being debated by two of the major carriers. They take different positions on them. One carrier here says that you will maximize auctions by limiting participation. Another carrier takes the exact opposite view. So these are the difficult issues that will be before the Commission to determine which of these is correct and in the public interest—

Mr. SHIMKUS. The public interest, the public policy designed by the legislation which was passed—

Mr. EPSTEIN. Correct.

Mr. SHIMKUS [continuing]. Which was to ensure that we had the funds available to roll out our first responder communications system, and all these other applications. So we have to get it right, and that is kind of why we are focusing on this. We know there is a struggle, but this is our best spectrum. It is not a small pro-

ceeding. This is a big deal. It is our best spectrum, and really, our biggest bite at the apple, and hence the oversight hearing on this.

Let me just finish up with a question, Mr. Feld. You almost had me when you talked about fracking, because I was there with you until—but you do propose a position which I find is more challenging for me that when you pull away some spectrum for other use, the remaining spectrum is going to be more valuable. I would like Ms. Ham and Ms. Marsh to respond whether they agree with that, and why or why not?

Ms. HAM. Thank you. Well one thing I wanted to clarify to make sure you understand, you guys were wise in putting other spectrum bands into the Spectrum Act so it is not just the broadcast spectrum that is going to raise money for public safety. There are at least 65 megahertz, and if you want to put some of that additional DOD federal spectrum in there, you know, that can raise money—

Mr. SHIMKUS. That is a debate for another time.

Ms. HAM [continuing]. As well. So there are other sources, and I just want to make sure that you understand that. And then again, your other question—excuse me—

Mr. SHIMKUS. Is when you in essence apportion some of the spectrum and you have a limited amount, does that make that more valuable in the overall proceeds might be more?

Ms. HAM. Well, you know, there are a lot of different factors that go into, you know, auctions, OK, and one of the biggest factors is the amount of spectrum that is in this auction. T-Mobile is calling for a band plan that has 20 more megahertz in the auction than AT&T, OK, as part of the band plan. That is going to have a huge impact on revenue, so we want to see the maximum amount of spectrum in the auction and we want to see the maximum amount of participation. We think that is going to raise the most revenue.

Ms. MARSH. And just to correct that, so there are different variations of band plans on the record, but we all agree we need to maximize spectrum available for auction. We believe, though, we have to get the engineering right, and we cannot put forward a band plan that has engineering challenges or introduces interference. On your specific question, which I take it to be about unlicensed allocations, AT&T supports unlicensed allocations if they can exist in guard bands, including the duplex gap, and not create interference. The biggest challenge would be if we introduced unlicensed services, and they interfere with adjacent licensed allocations, we will suppress the value of the licensed allocations and we will suppress the revenue raised at auction.

Ms. HAM. Yes, and I would just say on the unlicensed piece, I think we agree with that. We would like—you know, we want to make sure that whatever guard bands are set up for unlicensed—T-Mobile likes unlicensed. We use unlicensed. We have Wi-Fi calling in all our phones, but you know, we have to have reasonable interference—

Mr. SHIMKUS. My time is way expired. Thank you, Mr. Chairman.

Mr. WALDEN. Those were good answers, and you are right, we don't want this interference thing. We have had hearings on things

like light-squared GPS and things of that nature, and that is—we will go now to Mr. Doyle from Pennsylvania for questions.

Mr. DOYLE. Thank you, Mr. Chairman.

Mr. Epstein, maybe just to follow up on what my friend, Mr. Shimkus, and Ms. Ham said. Much has been made about the role the auction is going to play in funding FirstNet, and yet, part of the Act that created the incentive auction process also provided for multiple funding opportunities in the form of partial proceeds from other auctions going forward for the funding of FirstNet, which Ms. Ham just referred to. Just for the record, what other auctions will FirstNet draw its funding from, and how does the FCC view its obligation to raise these funds?

Mr. EPSTEIN. Let me apologize. I am innately and completely focused on the incentive auction.

Mr. DOYLE. Good.

Mr. EPSTEIN. The Wireless Bureau is running a number of other auctions, you are exactly right. There are a series of auctions which will also contribute to the FirstNet and other emergency funding obligations that are there, and I can supply you with a list of those auctions which are teed up.

Mr. DOYLE. Thank you.

Ms. Ham, let me ask you also. You know, members of the committee and stakeholders that we have heard from today have expressed concerns that spectrum aggregation limits will result in lower auction revenue. However, when I read your testimony, T-Mobile and other carriers are arguing quite the opposite. So tell us, how can an auction with limits on bidder eligibility result in higher revenues?

Ms. HAM. Well I think through greater participation. I think, you know, again as I said earlier, we don't really even know how much spectrum there is going to be in this auction, and if there isn't a lot of spectrum, I think it is easier for AT&T and Verizon that have an 80 percent concentration in this spectrum today to be able to divide and conquer it. I think all the bidders who sign on to the letter that was put into the record I think would attest to the fact that having some reasonable limits—and again, we are not calling for the exclusion of AT&T and Verizon. Bear in mind, they already have 80 percent of the lower band spectrum. We are talking about reasonable aggregation limits to give everybody else an opportunity, a foothold on this very important spectrum.

Mr. DOYLE. So you are saying if these reasonable limits you talk about are in place, that this will encourage more participation from smaller companies?

Ms. HAM. Yes, absolutely.

Mr. DOYLE. I mean, how does it drive up higher—

Ms. HAM. Absolutely, and I draw from my experience, you know, running these spectrum auctions in the early PCS auctions. We exactly did that. We had limits on the amount. You had a situation there where you had two cellular duopolies who had 25 megahertz of spectrum, and the Commission put in place limits on the ability for those duopolies to acquire PCS spectrum. The point of putting PCS spectrum out in the mid-'90s, remember those huge phones you used to have and the lack of innovation and the high prices we were paying? You know, we don't want to go back there, OK? Put-

ting new spectrum into the market is the most important auction that the Commission is going to run that I can think of, OK, at least a decade. It is very important to competition, so you need to get—you need to take into consideration the competitive structure of the market and the importance of this spectrum to competition going forward.

Mr. DOYLE. Mr. Epstein, I want to follow up on something that my friend Ms. Eshoo talked about, too. I am also very concerned that the band plans that are being offered by some stakeholders do not provide adequate spectrum for unlicensed usage. What do comments in the records at the FCC reflect on unlicensed spectrum, and how does the FCC view those comments in light of its responsibility to encourage innovation and flexible uses of spectrum?

Mr. EPSTEIN. Congressman Doyle, our original notice recognized the importance of both licensed and unlicensed spectrum. It is one of the four policy goals I talked about in my opening remarks. The Act permits use of unlicensed spectrum in the guard bands without auction, and what the notice does and what the Commission is committed to doing is a balanced approach. We will, of course, comply with the statutory requirement that the guard bands are not larger than technically reasonable, and the Commission will make the ultimate determination recognizing the importance of unlicensed spectrum as part of the overall plan.

Mr. DOYLE. I would urge the FCC to issue a public notice and hold a workshop to address those issues.

Finally, Mr. Epstein, I—and again, just for the record, because there is some concern about transparency and whether there is engagement in transparency going on at FCC. I did hear you mention that there were, what, 15 ex parte meetings with NAB. Just for the record, can you tell us how many times you have—that the Commission has met with witnesses here today on the panel?

Mr. EPSTEIN. I can, but I do want to preface by saying I consider this extremely positive things that the Commission has done. We get a lot out of these meetings. We hope they will continue, and we encourage and welcome them. What our records show is that we have had 15 meetings with the NAB. We have had 11 meetings with EOBC, the Padden organization, Public Knowledge, 3, AT&T, 8, and T-Mobile, 16.

Mr. DOYLE. Thank you very much. Mr. Chairman, thank you. I will yield back.

Mr. WALDEN. Gentleman yields back and we turn now to the gentleman from Louisiana, Mr. Scalise, for 5 minutes.

Mr. SCALISE. Thank you, Mr. Chairman. Appreciate you holding this hearing. I thank all the panelists. I know you are all working hard to ultimately get to the point we want to get to, and that is to have a successful spectrum auction.

I do want to take a moment to commend again the chairman, which I don't do a whole lot, but I usually just make fun of him. But you know, the fact that his legislation moved forward after years and years and years of people talking about this and trying to do it, he ultimately made it happen and so I do think it is important to note that. You know, when you see how hard it is to get things done in Congress, you know, the fact that he got us to this point is important, and that is why I think it is so important that

we make sure now that it is done right. You know, when you look at the two purposes that were brought forward when the chairman brought the legislation that was ultimately included in the final Act, it was to, number one, make sure that we had the \$7 billion to go and build out a national public safety network, something that hadn't been done since September 11, and been promised by a lot of people, but ultimately finally is now at the forefront of being ready to happen. But the other part of that was to also generate additional revenue to reduce the federal deficit, and that is an important point that can't be lost when we are talking about how to set up the rules, and the rules of any game are very important because ultimately, they can have a major impact in how the game is going to be played.

And so Mr. Epstein, I want to ask you, we have had a lot of different testimony. There have been a lot of people for months and months trying to make sure that the rules are set up in a way that is fair, and in some cases, they want to make sure it is fair to them. I understand that is their job. But your role is to make sure it is not only fair for the people that will be participating, but it is also fair for the American taxpayer, because the American taxpayer has a big role in this. Because if it is not set up properly and there are limitations to entry that don't allow for the amount of bidding that ultimately yields the greatest amount of revenue, then that is less money that goes to reducing the national deficit. And that is something that we have got to watch out for, not only as legislators, but you as a regulator who is drafting these rules. If there are limitations put in place to entry that ultimately would reduce that competition, then that can reduce the revenue, not only to build out an interoperable network for our first responders, but also to pay down the deficit.

So when you are looking at that, are you thinking about that in addition to all the interest you are getting from the people that will hopefully be coming to bid, but also are you thinking about the fact that you need to make sure that yielding the most revenue was a big component of this Act passing so that we can reduce the deficit?

Mr. EPSTEIN. Yes, Congressman, we are looking at that as a major goal. We are also looking at the overall statute, which has a series of goals and I think as many people have stated here, many Congress people have stated here today, it is a balancing act but the goal that you point out, of course, is an extremely important part of that balance that must be struck.

Mr. SCALISE. Thank you, and I would encourage you to continue to keep that mind in view as well.

I want to ask both Ms. Ham and Ms. Marsh, because you have competing views on how that set of rules is established. I guess, Ms. Ham, I have trouble when you say that limitations on auction access will increase competition. I guess I am not quite understanding that, so I want to get your take, and then also get Ms. Marsh's comment on that as well.

Ms. HAM. Sure. Thank you for that question. I think the broad participation—in the auctions that I have had experience with where you had broad participation, so you have a lot of bidders bidding on a lot of markets, those are the healthy auctions that are going to raise revenue, OK? Plain and simple. I think T-Mobile, to-

gether with large regional carriers that submitted the letter today all are calling for limits, OK, because they believe that it will make it more likely that they will participate than if you don't have those limits. So reasonable limits—and again, I think T-Mobile is not suggesting excluding AT&T and Verizon, OK, understanding they have 80 percent of the low band spectrum today, OK, we are not saying exclude them, we are saying give other people a shot at this very important spectrum, OK—

Mr. SCALISE. So if I could get Ms. Marsh's—

Ms. HAM. And we think getting strong competition in the auction is the way to raise the revenues.

Mr. SCALISE. Thanks. Ms. Marsh?

Ms. MARSH. Yes. I think to understand what is going to happen at this auction, we don't need to go back to the PCS auction. We should look at what happened in the last major auction, the 700 megahertz auction. There, there were 214 qualified bidders, and of those—and it was an open participation auction. No one was limited or excluded in any way. One hundred and one bidders won licenses at that auction and even though it was a difficult economic climate at the time, revenues exceeded congressional expectations by over \$10 billion. An open auction can succeed and produce a diversity of winners. Now Mr. Feld suggested a lot of companies were shut out. Let me point to a couple of companies who signed the letter that Ms. Ham just referred to that won significant spectrum at that auction. DISH won 168 licenses, including spectrum covering most of the United States. King Street Wireless, who is partnered with U.S. Cellular, deploy LTE services in 700 megahertz, was the fourth largest winner in that auction a megahertz POPS basis. C Spire, who is also deploying LTE services in its territory, was the tenth largest winner. An open auction with full participation can result in a diversity of bidders, and it will maximize revenues consistent with congressional intent.

If I have a moment, I would also like to respond to some of the comments made about low band spectrum. There has been a lot of discussion about the importance of this auction because it is low band spectrum. In a broadband world it is about capacity, and capacity is driven by two things: the width of the band you can put together, regardless of where it sits, it is about how wide the channels are and how dense you build the network. And that type of environment, it is not about low band or high band spectrum. It is about putting together wide band spectrum and building very dense networks, and any advantage that may have been perceived from the low band spectrum in a voice world is very much negated in a broadband world, where it is really about capacity and not coverage.

Mr. SCALISE. Well thanks. I appreciate your testimony and look forward to a successful spectrum auction. I do want to mention that the broadcasters ought to be treated fairly, because they are an active participant in this—sometimes may be inactive—but they ought to be treated fairly and the impact it will have on them. I know FCC is looking at that as well. And with that, Mr. Chairman, I yield back the balance of my time.

Mr. WALDEN. Gentleman yields back, and I would like to ask unanimous consent to enter into the record a letter from the Tele-

communications Industry Association, the leading trade association with global manufacturers, vendors, and suppliers of information communications technology, supporting broad auction participation and maximizing licensed spectrum. Without objection, that will be entered into the record.

[The information appears at the conclusion of the hearing.]

Mr. WALDEN. I think that concludes our hearing for today. We really appreciate your testimony, your counsel, the work that you are doing. Obviously there are some issues that still need to be resolved. We took note of that, but we commend you as you move forward to work this out so we have a successful auction, so we continue to be the generator of innovation and new technologies, and generate some revenue to pay for first responders and lower our deficit.

Ms. HAM. Thank you.

Ms. ESHOO. Mr. Chairman, may I ask——

Mr. WALDEN. Yes.

Ms. ESHOO. Just I would like to thank you for the excellence of this hearing, and bringing together the witnesses that we have here today. Very important. You have all been instructive, and bravo, Mr. Chairman. So this is really enlightening for the subcommittee, and I am very pleased that there are two women.

Ms. HAM. Go girl.

Ms. ESHOO. Even though they don't agree with each other, two women in very high positions in very important American companies, so thank you again, Mr. Chairman.

Mr. WALDEN. It is a team effort, as you know, organizing our panel, so we appreciate you and your staff's work as well.

And with that, we will stand adjourned.

[Whereupon, at 12:25 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

#### PREPARED STATEMENT OF HON. FRED UPTON

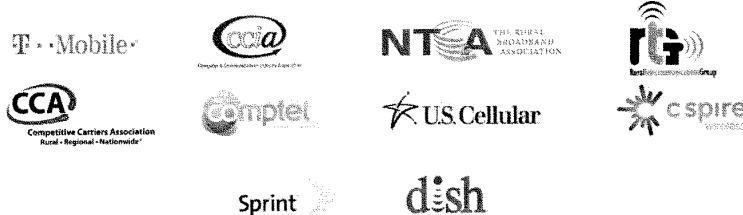
It has been nearly a year and a half since the Middle Class Tax Relief and Job Creation Act of 2012 was signed into law—important legislation that included a provision granting the FCC the authority to conduct a broadcast television spectrum incentive auction. This unique auction not only fulfills long standing recommendations to create a nationwide public safety network, but it also helps to meet the soaring demand for commercial mobile broadband services. This auction has the potential to create jobs, spur innovation and breakthrough technologies, and make a substantial down payment toward the national debt. However, in order for the auction to succeed, the FCC must resolve several concerns that both stakeholders and my colleagues here in Congress have regarding the implementation of the law. We continue to exercise our oversight role in the effort to keep the auction on track as intended.

As the FCC works to implement this law, it must ensure coordination of television stations along the borders with Mexico and Canada. My home state of Michigan is particularly affected by this which is why earlier this year I was joined by my friend, Chairman Emeritus Dingell, and the entire Michigan Congressional delegation, in a letter to the FCC expressing our concerns. If we fail to get border coordination right, the consequences will be less spectrum cleared for auction and less money to pay for the nationwide public safety network and the reduction of our national debt. It is critical that we get the coordination done, and done before we ask broadcasters to take a leap of faith in the incentive auction.

In addition to the important border issues that must be resolved, robust and unfettered competition among bidders is a critical element needed for a successful auction. The FCC must not pick winners and losers by excluding certain parties from the auction or constraining parties' ability to bid. Doing so would not only reduce revenues but also violate the statute.

We only have one shot to make this auction successful. Incentive auctions are capable of driving incredible technological and economic benefits. Let's make sure we do it right.

# # #



July 19, 2013

The Honorable Fred Upton  
Chairman  
Committee on Energy & Commerce  
U.S. House of Representatives  
2125 Rayburn House Office Building  
Washington, D.C. 20515-6115

The Honorable Greg Walden  
Chairman  
Subcommittee on Communications & Technology  
Committee on Energy & Commerce  
U.S. House of Representatives  
2125 Rayburn House Office Building  
Washington, D.C. 20515-6115

The Honorable Henry Waxman  
Ranking Member  
Committee on Energy & Commerce  
U.S. House of Representatives  
2125 Rayburn House Office Building  
Washington, D.C. 20515-6115

The Honorable Anna Eshoo  
Ranking Member  
Subcommittee on Communications & Technology  
Committee on Energy & Commerce  
U.S. House of Representatives  
2125 Rayburn House Office Building  
Washington, D.C. 20515-6115

Dear Chairmen Upton and Walden and Ranking Members Waxman and Eshoo:

The upcoming incentive auction of the 600 MHz band offers a unique opportunity to strengthen competition in wireless broadband services, benefit consumers, and raise revenues for the U.S. Treasury. With these goals in mind, the undersigned parties, who represent a broad-based group of Fortune 100 companies, rural wireless carriers, and small businesses, write to voice their support for policies that will encourage wide participation in the upcoming auction. Increased auction participation will advance competition, thereby benefiting consumers. At the same time, increased auction participation improves the potential for high spectrum auction revenues to fund the public safety broadband network and for deficit reduction that benefits all American taxpayers.

Expanding auction participation and promoting aggressive bidding depends upon drawing many different bidders into the 600 MHz auction. Contestants will be hesitant to play a game they

cannot win. Without some constraint on the ability of the two dominant carriers to acquire all of the high-quality spectrum available in the 600 MHz auction, smaller rivals and upstarts will be significantly disadvantaged from acquiring the spectrum resources in the auction they need to compete against those carriers. If defeat seems inevitable, smaller carriers will not incur the significant costs involved in planning for and participating in the 600 MHz auctions. And without competitive pressure from smaller bidders, the two dominant incumbents can acquire the auctioned spectrum at below-market rates, reducing auction revenues for the U.S. Treasury and further constraining competitive alternatives for wireless consumers.

The Department of Justice's ("DOJ") ex parte submission in April to the Federal Communications Commission (the "Commission") described this dynamic in detail. The DOJ also discussed the broadband-friendly performance characteristics of 600 MHz spectrum that make excessive concentration of low-frequency licenses in the hands of the industry's two dominant wireless carriers especially threatening to wireless competition. As noted by the DOJ, the nation's two largest wireless carriers already hold 78 percent of the low-frequency broadband-capable spectrum and account for more than 80 percent of wireless industry revenues. These carriers have every incentive to employ their extensive market power to foreclose smaller competitors from participating in the 600 MHz auction and thus compromise the growth of the broadband economy.

None of the undersigned parties have advocated for any qualified entity to be excluded from the auction. On the contrary, having the two dominant incumbents participate – and win – their fair share of the 600 MHz licenses helps ensure sufficient economies of scale to make wireless deployment profitable. The goal is not exclusion, but rather a transparent, balanced approach prior to the auction that ensures every wireless carrier has a fair opportunity to compete and win in the auction.

Sensible spectrum-aggregation limits will increase competition, investment, and innovation in the wireless marketplace. Reasonable limits also have the potential to increase auction revenue by attracting a wider base of potential bidders – bidders that might otherwise be deterred from participating. For these reasons, the undersigned parties support pro-competitive, spectrum-aggregation limits in the upcoming 600 MHz auction.

Respectfully submitted,

Kathleen Ham  
Vice President, Federal Regulatory  
T-Mobile USA, Inc.

Cathy Sloan  
Vice President, Government Relations  
Computer & Communications Industry  
Association

Rebecca Thompson  
General Counsel  
Competitive Carriers Association

Carella D. Bennet  
General Counsel  
Rural Telecommunications Group, Inc.

Jeffrey Blum  
Senior Vice-President and Deputy General  
Counsel  
DISH Network LLC

Lawrence R. Krevor  
Vice President, Legal and Government Affairs  
Sprint Corporation

Eric B. Graham  
Senior Vice President - Strategic Relations  
C Spire Wireless

Alan Hill  
Senior Vice President, Government Relations  
COMPTEL

Jill Canfield  
Director, Legal & Industry and Assistant  
General Counsel  
NTCA—the Rural Broadband Association

Grant Spellmeyer  
Vice President, Federal Affairs & Public Policy  
US Cellular



July 22, 2013

The Honorable Fred Upton  
 Chairman  
 Committee on Energy & Commerce  
 U.S. House of Representatives  
 2125 Rayburn House Office Building  
 Washington, D.C. 20515-6115

The Honorable Greg Walden  
 Chairman  
 Subcommittee on Communications & Technology  
 U.S. House of Representatives  
 2125 Rayburn House Office Building  
 Washington, D.C. 20515-6115

The Honorable Henry Waxman  
 Ranking Member  
 Committee on Energy & Commerce  
 U.S. House of Representatives  
 2125 Rayburn House Office Building  
 Washington, D.C. 20515-6115

The Honorable Anna Eshoo  
 Ranking Member  
 Committee on Energy & Commerce  
 U.S. House of Representatives  
 2125 Rayburn House Office Building  
 Washington, D.C. 20515-6115

Dear Chairman Upton, Chairman Walden and Ranking Members Waxman and Eshoo:

We urge you to support policies in the upcoming incentive auction of the 600 MHz band by the Federal Communications Commission ("FCC") that will encourage the greatest possible participation by the largest number of participants. The spectrum being auctioned is especially valuable because of its broadband-friendly performance characteristics, and it is important for the future competitiveness of the mobile market that the two dominant carriers are not allowed to acquire the lion's share of this valuable and high-quality spectrum.

These two dominant carriers—AT&T and Verizon—currently hold 78 percent of available low-frequency spectrum, and take in over 80 percent of wireless industry earnings. These dominant players have the size and power to foreclose smaller bidders from participating in the auction, and no regional carrier or new entrant to the market will invest the considerable time, energy and money needed to plan for participation in such an auction if they feel certain in advance that the

outcome is predetermined. If smaller carriers decline to participate in such an auction, AT&T and Verizon will be able to acquire this valuable low-frequency spectrum at below-market rates, threatening both consumers and the future competitiveness of the mobile wireless marketplace. Below-market rates for the broadcast incentive auction spectrum will also mean reduced auction revenues for the U.S. Treasury and all American taxpayers, including funding earmarked for the FirstNet public safety network initiative.

Broad-based competition in wireless broadband services plays an important role in stimulating wireless innovation, providing independent outlets for commerce and free expression, and protecting consumers against onerous rates, terms, and conditions. The Department of Justice has properly concluded that rules for the 600 MHz auction are necessary to ensure that wireless competition can flourish by providing non-dominant operators, which largely lack low-frequency spectrum, a fair opportunity to access to this critical resource. Congress should heed this advice.

While no qualified entity should be barred from participating in the upcoming auction, clear, transparent, and fair *limitations* on how much low-frequency spectrum any one carrier can acquire do not bar participation. A pro-competitive, pro-consumer limitation on spectrum concentration benefits consumers by allowing all interested bidders a legitimate chance of winning the spectrum they need to deliver wireless broadband services while also promoting less predictable, more aggressive bidding for a valuable national resource.

Establishing rules to increase the participation of smaller carriers in the 600 MHz auction not only will lay the groundwork for future competition in the mobile wireless market, but also will give rise to consumer benefits in the form of improved service offerings nationwide and will benefit taxpayers by increasing the amount of revenue generated. We ask you to support rules that promote the public interest in competition, consumer protection, innovation, rural service, and accelerated broadband deployment.

Respectfully submitted,

Gigi Sohn  
President and Co-Founder  
Public Knowledge

Ellen Stutzman  
Director of Research & Public Policy  
Writers Guild of America, West

Michael Calabrese  
Director, Wireless Future Project  
Open Technology Institute  
New America Foundation

Matt Wood  
Policy Director  
Free Press

Alex Nogales  
President & CEO  
National Hispanic Media Coalition

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

In the Matter of

Policies Regarding Mobile Spectrum Holdings

WT Docket No. 12-269

***Ex Parte* Submission of the United States Department of Justice**

**Executive Summary**

In this filing, the Department of Justice's Antitrust Division reviews the importance of spectrum to competition and innovation in the wireless industry. The Department believes that a set of well-defined, competition-focused rules for spectrum acquisitions, particularly in auctions, would best serve the dual goals of putting spectrum to use quickly and promoting consumer welfare in wireless markets. The Department notes that bands of spectrum have different characteristics that may affect the competitive landscape. In particular, for instance, the propagation characteristics of lower frequency spectrum permit better coverage in both rural areas and building interiors. A carrier's position in low-frequency spectrum may determine its ability to compete in offering a broad service area, including its ability to provide coverage efficiently in rural areas. Therefore, the Department concludes that rules that ensure the smaller nationwide networks, which currently lack substantial low-frequency spectrum, have an opportunity to acquire such spectrum could improve the competitive dynamic among nationwide carriers and benefit consumers.

### I. Introduction

The United States Department of Justice (“Department”) provides this filing in response to a Federal Communications Commission (“FCC” or “Commission”) Notice of Proposed Rulemaking (“Notice”), published in the *Federal Register* on October 9, 2012.<sup>1</sup> The Notice requests comments to assist the FCC in a comprehensive review of its policies governing mobile spectrum holdings. The last comprehensive review was in 2003. The FCC seeks to ensure that its rules provide “greater certainty, transparency and predictability to make investment and transactional decisions, while also promoting the competition needed” for continued innovation.<sup>2</sup>

The Department of Justice’s Antitrust Division, as a federal agency responsible for enforcing the antitrust laws and promoting competition, has significant expertise in telecommunications issues and has participated in prior Commission proceedings that addressed the role of competition in telecommunications.

Over the last thirty years, the Department has helped to facilitate the transformation of the telecommunications industry, either directly in its role as an agency that enforces the antitrust laws or indirectly in its role as competition policy advocate and statutory respondent in cases involving appeals of Commission orders under the Hobbs Act.<sup>3</sup> Thus, from the critical decisions involved in resolution of the AT&T antitrust litigation and the implementation of that consent decree, to the decisions related to the design of the wireless telecommunications marketplace and the implementation of the Telecommunications Act of 1996, the Department has ensured that the preservation of competition in the

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<sup>1</sup> Policies Regarding Mobile Spectrum Holdings, 77 Fed. Reg. 61,330 (proposed Oct. 9, 2012) (to be codified at 47 C.F.R. pt. 20), available at [www.gpo.gov/fdsys/pkg/FR-2012-10-09/pdf/2012-24790.pdf](http://www.gpo.gov/fdsys/pkg/FR-2012-10-09/pdf/2012-24790.pdf) (“Notice”).

<sup>2</sup> *Id.* at 61,334.

<sup>3</sup> Hobbs Anti-Racketeering Act, 18 U.S.C. § 1951.

telecommunications industry has been a key priority.<sup>4</sup> Similarly, with respect to its merger review authority, the Department has evaluated a series of transactions that have reshaped the telecommunications marketplace, including investigations of the evolving roles of broadband Internet access and wireless services.<sup>5</sup>

Most recently, in 2011, after close coordination with the FCC, the Department filed a lawsuit to block a transaction that would have combined two of the only four wireless carriers with nationwide networks, AT&T Inc. and T-Mobile USA, Inc., ultimately leading the parties to abandon the merger.<sup>6</sup>

In 2012, the Department and the Commission reviewed a transaction in which Verizon, the largest wireless carrier in the nation, entered marketing agreements with and acquired spectrum from four of the nation's largest cable companies. The Department obtained limitations on the scope and duration of Verizon's agreements with the cable companies to prevent competitive harm and approved the acquisition of spectrum after

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<sup>4</sup> See, e.g., *United States v. American Telephone & Telegraph Co.*, 552 F. Supp. 131 (D.D.C. 1982), aff'd sub nom. *Maryland v. United States*, 460 U.S. 1001 (1983) (Modification of Final Judgment requiring Bell System break-up); Reply Comments of the United States Department of Justice, *In re Amendment of the Commission's Rules To Establish New Personal Communications Services*, FCC Gen. Docket No. 90-314, E.T. Docket No. 92-100 (Jan. 19, 1993) (addressing competition between cellular and PCS providers and allocation of PCS spectrum to promote competition); Evaluation of the U.S. Department of Justice, *In re Application by SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc., d/b/a Southwestern Bell Long Distance for Provision of In-Region, InterLATA Services in Texas*, FCC CC Docket No. 00-4 (Feb. 14, 2000) (regarding Regional Bell Operating Company entry into long distance services under Section 271 of the Telecommunications Act). More recently, the Department participated in the Commission's initial "net neutrality" proceeding. *Ex Parte Filing of the United States Department of Justice, In re Broadband Industry Practices*, FCC WC Docket 07-52 (Sept. 6, 2007).

<sup>5</sup> See case filings involving *United States, et al. v. Cingular Wireless Corp., SBC Commc'n Inc., BellSouth Corp., and AT&T Wireless Serv's, Inc.*, available at [www.justice.gov/atr/cases/cingular.htm](http://www.justice.gov/atr/cases/cingular.htm); *United States, et al. v. Verizon Commc'n Inc. and Alltel Corp.*, available at [www.justice.gov/atr/cases/verizon3.htm](http://www.justice.gov/atr/cases/verizon3.htm); *United States v. AT&T Inc. and Dobson Commc'n Corp.*, available at [www.justice.gov/atr/cases/dobson.htm](http://www.justice.gov/atr/cases/dobson.htm); *United States et al. v. AT&T Inc. and Centennial Commc'n Corp.*, available at [www.justice.gov/atr/cases/attcentennial.htm](http://www.justice.gov/atr/cases/attcentennial.htm).

<sup>6</sup> See Press Release, U.S. Dep't of Justice, Justice Department Issues Statements Regarding AT&T Inc.'s Abandonment of Its Proposed Acquisition of T-Mobile USA Inc. (Dec. 19, 2011), available at [www.justice.gov/atr/public/press\\_releases/2011/278406.pdf](http://www.justice.gov/atr/public/press_releases/2011/278406.pdf).

Verizon agreed to sell a significant portion of that spectrum to T-Mobile.<sup>7</sup> In these cases and numerous other matters, the Department coordinated closely with the FCC.

In its Notice, the Commission sets forth a series of important questions. The Notice seeks comments on the Commission's current approach to product market definition in light of changes to technology and consumer demand, its approach to geographic market definition, and the most appropriate means for considering both local and national competitive effects. In addition, the Notice requests comments on how the Commission should approach differing characteristics of spectrum bands and how best to evaluate the spectrum holdings of each licensee.

The Commission also seeks comments on the costs and benefits of a case-by-case analysis of mobile spectrum aggregation to consumers and competition, and it requests comments on how those costs and benefits might differ when applying case-by-case analysis specifically to spectrum auctions. Furthermore, the Commission asks for comments on the application of bright-line limits to initial licenses acquired through competitive bidding.

The Department and the FCC, utilizing their respective expertise and statutory authority, work in complement to foster innovation and efficiency in our nation's telecommunications industry, to the benefit of consumers. For instance, the Commission possesses technical expertise in technology and spectrum, and the Department has broad expertise in analyzing how markets are structured and the dynamics of how they function. Under the federal antitrust laws, the Department's responsibilities include enforcing laws that prohibit transactions or conduct that substantially lessen competition or tend to create

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<sup>7</sup> See Press Release, U.S. Dep't of Justice, Justice Department Requires Changes to Verizon-Cable Company Transactions to Protect Consumers, Allows Procompetitive Spectrum Acquisitions to Go Forward (Aug. 16, 2012), available at [www.justice.gov/atr/public/press\\_releases/2012/286098.pdf](http://www.justice.gov/atr/public/press_releases/2012/286098.pdf).

a monopoly.<sup>8</sup> At the same time, the Commission has a statutory framework vital for managing the Nation's scarce spectrum resources across a variety of essential public and private uses, making it possible for the Commission to more broadly serve the "public interest, convenience, and necessity" in promoting a better competitive environment in wireless markets.<sup>9</sup> As a result, the Department's ability to benefit from the Commission's expertise greatly enhances its review of transactions and conduct in the telecommunications industry, while the Department provides market analysis that assists the Commission in crafting policies that promote competition under its statutory framework.

The Department, the Commission, or both can further the goals of competition in a variety of ways, including: (a) merger enforcement; (b) prohibitions or prosecutions of business practices that thwart innovation; (c) distribution or allocation of public assets (such as spectrum); and (d) other public policies that affirmatively lower entry barriers facing new entrants and new technologies. In this filing, the Department discusses the importance of spectrum to competition and innovation in the wireless industry and the factors the Department considers to be important in assessing the competitive effects of transactions in wireless markets.

## **II. The Importance of Competition in Wireless Markets**

Competition has been a major force in driving innovation in telecommunications, bringing consumers a wider range of choices of products and services and better prices.

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<sup>8</sup> 15 U.S.C. § 1 *et seq.*

<sup>9</sup> 47 U.S.C. § 310(d).

Since the breakup of the Bell System in 1984<sup>10</sup> and passage of the Telecommunications Act of 1996,<sup>11</sup> the telecommunications industry has experienced significant technological, economic, and regulatory changes. Technological development has made it possible for providers of traditional telephone and video services to enter each others' markets while also bringing widespread access to mobile wireless data and broadband Internet services. At the same time, since the passage of the 1996 Act, federal laws and government policy increasingly have favored the provision of telecommunications services on a competitive basis. The Department's work with the Commission in support of this development is founded on the belief that competition generally represents the best method of ensuring that consumers receive low-priced, high-quality products and services, greater choice among providers, and important innovation.

Rivalry among competitors provides strong pressures to maintain existing demand and to win over new customers in a number of ways, such as seeking out means for lowering costs or for developing new or better products and services, through new technology, new business methods, or other sources of efficiency. Indeed, competitive forces have been a central driver of innovations that have enabled carriers to expand capacity and improve service quality. For instance, when challenging the proposed merger of AT&T and T-Mobile, the Department noted that AT&T felt competitive pressure from T-Mobile's network improvements, and that AT&T upgraded its own services in response.<sup>12</sup> In the year since the proposed AT&T and T-Mobile transaction was

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<sup>10</sup> *United States v. American Telephone & Telegraph Co.*, 552 F. Supp. 131 (D.D.C. 1982), *aff'd sub nom. Maryland v. United States*, 460 U.S. 1001 (1983).

<sup>11</sup> Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996), codified at 47 U.S.C. § 151 *et seq.*

<sup>12</sup> Complaint at 13-14, *United States et al. v. AT&T Inc., T-Mobile USA, Inc. and Deutsche Telekom AG* (D.D.C. filed Sep. 30, 2011) (No. 11-1560).

abandoned, T-Mobile has continued to develop new plan structures designed to win customers from AT&T, including by offering customers the choice of service plans that do not build in the cost of expensive handset subsidies.<sup>13</sup> In addition, T-Mobile and other carriers have aggressively pursued strategies for addressing their network constraints, such as reclaiming spectrum currently being used for older technologies, utilizing new “small cell” technology, or creating business models for commercializing new spectrum.<sup>14</sup>

Preserving rivalry and limiting or eliminating market power enables competitive forces to work to benefit consumers. The ability to exercise market power can take various forms and harm competition in multiple ways. Market power can lead directly to consumers paying higher prices, can insulate a carrier from the competitive pressures to expand service or improve quality, and can diminish innovation. Moreover, the fewer competitors in a market, the higher the risk that competitors can coordinate or act in concert to the detriment of consumers and innovation.

In its recent merger reviews the Department has found that the four largest wireless carriers (AT&T, Verizon, Sprint, and T-Mobile) compete across many dimensions,

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<sup>13</sup> See, e.g., Salvador Rodriguez, *T-Mobile to ditch phone subsidies, go after AT&T in 2013*, LOS ANGELES TIMES (Dec. 7, 2012), available at [www.latimes.com/business/technology/la-fi-tm-t-mobile-iphone-subsidize-att-20121206,0,2610892.story](http://www.latimes.com/business/technology/la-fi-tm-t-mobile-iphone-subsidize-att-20121206,0,2610892.story) (describing T-Mobile’s strategy to “aggressively target AT&T” with plans that “offer customers lower rates for their cellular services by disassociating it with the price of a subsidized phone”).

<sup>14</sup> See, e.g., Greg Bensinger, *T-Mobile to Pump \$4 Billion Into Network, 4G LTE Buildout*, WALL ST. J. (Feb. 24, 2012) (describing T-Mobile’s plans to re-deploy some of its spectrum currently dedicated to 2G services in order to launch LTE); Marguerite Reardon, *AT&T execs are confident about spectrum position*, CNET (Nov. 7, 2012), [news.cnet.com/8301-1035\\_3-57546288-94/at-t-execss-are-confident-about-spectrum-position](http://news.cnet.com/8301-1035_3-57546288-94/at-t-execss-are-confident-about-spectrum-position) (describing AT&T’s efforts to “chart a new path,” including AT&T’s plan to deploy LTE to cover 300 million Americans, and quoting an AT&T executive saying “AT&T is well-positioned now”); Marguerite Reardon, *4G spectrum spat settled: Sirius and AT&T can coexist after all*, CNET (Oct. 17, 2012), [news.cnet.com/8301-13578\\_3-57534378-38/4g-spectrum-spat-settled-sirius-and-at-t-can-coexist-after-all](http://news.cnet.com/8301-13578_3-57534378-38/4g-spectrum-spat-settled-sirius-and-at-t-can-coexist-after-all) (describing an agreement between AT&T and Sirius paving the way for WCS spectrum to be used for wireless services); David Goldman, *AT&T’s about-face on 4G*, CNN MONEY (Nov. 7, 2012), [money.cnn.com/2012/11/07/technology/mobile/att-4g/index.html](http://money.cnn.com/2012/11/07/technology/mobile/att-4g/index.html) (noting that AT&T was able to “charter[] a new path” after the merger in part using the WCS spectrum).

including coverage, network speed, network technologies, and price.<sup>15</sup> Moreover, the different arrays of choices offered by each of these carriers are important to consumers, creating an environment in which carriers are forced to compete and reposition themselves to improve and differentiate their offerings. Even though the carriers engage in this competition, the marketplace is not uniformly competitive. Carriers do have the ability and, in some cases, the incentive to exercise at least some degree of market power, particularly given that there is already significant nationwide concentration in the wireless industry. Therefore, the Department believes it is essential to maintain vigilance against any lessening of the intensity of competitive forces.

The Department also believes that spectrum policies that promote competition and enhance the potential for entry and expansion in the wireless market play a vital role in protecting, and indeed enhancing, the competitive dynamic to the benefit of American consumers. We therefore welcome the opportunity to provide our views on the relationship between the work of the Commission as it designs its auction and other spectrum-related rules and the preservation of the competitive forces that are a critical engine for innovation in the wireless market.

### **III. The Importance of Spectrum to Competition and Innovation**

The Department of Justice's principal concern is that acquisitions of spectrum, whether at auction or through subsequent transactions, should not be used to create or enhance market power. For its part, the Department is charged with preventing transactions that are harmful to consumers and competition, including transactions

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<sup>15</sup> In some local areas, smaller carriers may also offer alternatives that consumers value; for instance, in some rural areas, a local carrier operating with low-frequency spectrum may offer particularly strong coverage.

involving the acquisition of spectrum. It is equally important, however, that spectrum auctions set the stage for the wireless industry to innovate and for consumers to fully realize the benefits of competition.

#### **A. Spectrum Is a Key Input for Mobile Wireless Services**

Our nation's ability to improve the competitive environment in wireless markets hinges on the availability of spectrum. In recent years, mobile wireless markets have undergone tremendous change. Mobile wireless telecommunications devices have evolved into a profusion of smartphones, feature phones, tablets, data cards, e-readers, and other devices, feeding into consumer demand for faster, more reliable mobile broadband connections that drive further innovation. These changes in technology and demand have made spectrum a critically scarce resource. Consequently, the Department strongly supports the Commission in taking on this comprehensive review of its mobile spectrum holdings policies as it also moves to reallocate a considerable array of spectrum and make it available for mobile wireless services.

For each wireless carrier—whether an incumbent national provider, a small carrier looking to expand into new markets or services, or a new entrant—spectrum in part determines the carrier's capacity. Therefore, carriers will need to acquire additional spectrum and make more efficient use of spectrum if they are to respond to growing consumer demand for a wide array of wireless services and devices.<sup>16</sup>

#### **B. Spectrum Acquisitions Should Lead to Efficient Use of Spectrum**

The goal in assigning licenses to spectrum reallocated for commercial services

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<sup>16</sup> See Notice at 8 (citing the Council of Economic Advisers' finding that "the spectrum currently allocated to wireless is not sufficient to handle the projected growth in demand, even with technological improvements allowing for more efficient use of existing spectrum and significant investment in new facilities." Council of Economic Advisers, *The Economic Benefits of New Spectrum for Wireless Broadband*, at 5 (Feb. 2012)).

should be to ensure that it generates the greatest ultimate benefit to the consumers of those services. However, due to the scarcity of spectrum, the Department is concerned that carriers may have incentives to acquire spectrum for purposes other than efficiently expanding their own capacity or services.<sup>17</sup> Namely, the more concentrated a wireless market is, the more likely a carrier will find it profitable to acquire spectrum with the aim of raising competitors' costs. This could take the shape, for example, of pursuing spectrum in order to prevent its use by a competitor, independent of how efficiently the carrier uses the spectrum. Indeed, a carrier may even have incentives to acquire spectrum and not use it at all. The result is that spectrum may not be put to its most efficient use, which harms all consumers of wireless services and can have an exclusionary effect on the carrier's competitors.

Put another way, as the Department has explained previously,<sup>18</sup> once new spectrum is identified and freed up for broadband, there remains the issue of how to assign it to individual providers. When market power is not an issue, the best way to pursue this goal in allocating new resources is typically to auction them off, on the theory that the highest bidder, i.e., the one with the highest private value, will also generate the greatest benefits to consumers. But that approach may not lead to market outcomes that would ordinarily maximize consumer welfare due to the presence of strong wireline or wireless incumbents, since the private value for incumbents in a given locale includes not only the revenue from use of the spectrum but also any benefits gained by preventing rivals from improving their services and thereby eroding the incumbents' existing businesses. The latter might be

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<sup>17</sup> See *Ex Parte Submission of the United States Department of Justice, In the Matter of Economic Issues in Broadband Competition: A National Broadband Plan for Our Future*, FCC GN Docket No. 09-51 (January 4, 2010) (hereinafter "U.S. Dep't of Justice Broadband Comments"), at 23-24.

<sup>18</sup> *Id.*

called “foreclosure value” as distinct from “use value.” The total private value of spectrum to any given provider is the sum of these two types of value. However, the “foreclosure value” does not reflect consumer value; to the contrary, it represents the private value of foreclosing competition by, for instance, forestalling entry or expansion that threatens to inject additional competition into the market.

The Department believes that consideration of the role that “foreclosure value” might play in how spectrum is used is crucial because local mobile wireless markets across the nation are relatively concentrated. In a highly concentrated industry with large margins between the price and incremental cost of existing wireless broadband services, the value of keeping spectrum out of competitors’ hands could be very high. For example, if competitors acquire spectrum to provide broader service offerings, expand coverage, or increase capacity, prices for existing customers would fall, threatening the margins being earned. Also, a competitor’s lack of spectrum may require higher capital expenditures, such as having to build more cell towers, in order to provide competitive service. Thus, a large incumbent may benefit from acquiring spectrum even if its uses of the spectrum are not the most efficient if that acquisition helps preserve high prices. Accordingly, the Commission should consider the potential that the acquisition of specific blocks of spectrum may have to foreclose or raise the costs of competitors in its policies on spectrum acquisition.

This potential risk, in turn, underscores the need for additional spectrum. Based on the Department’s experience with highly concentrated telecommunications markets, and more generally, there are substantial advantages to making available new spectrum in order to enable smaller or additional providers to mount stronger challenges to large wireless

incumbents.<sup>19</sup> Absent compelling evidence that the largest incumbent carriers are already using their existing spectrum licenses efficiently and their networks are still capacity-constrained, the Department would normally expect the highest use value for new spectrum that is in the public interest to come from rivals to the leading firms that could effectively make use of additional spectrum to expand capacity, improve coverage, or introduce new services in an effort to challenge the dominant firms.

### **C. The Competitive Significance of Different Spectrum**

To determine whether a transaction will result in competitive harm in any relevant markets, the Department assesses each carrier's ability to compete, including its capacity to meet consumer demand. Since each carrier's portfolio of spectrum holdings in part determines its capacity, the differing characteristics of bands of spectrum are important. In its review of mergers involving spectrum transfers, the Department considers the characteristics of the spectrum being acquired and the capacity needs of the acquirer. For example, low-frequency spectrum (usually referring to frequencies below 1 GHz) has superior propagation characteristics, permitting better coverage in both rural areas and buildings. To the extent carriers have low-frequency spectrum available, often they seek to allocate at least some of that spectrum to each of their deployed technologies (as has been the case with 2G, 3G, and 4G) to ensure that customers with handsets utilizing each technology can maintain excellent coverage throughout the network. On the other hand, when a carrier is attempting to augment the capacity of its network in dense urban areas,

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<sup>19</sup> In the AT&T-Cingular merger, the Department required divestitures of bare spectrum in several markets. The Department was particularly concerned that, without the divestitures, the merged entity would control too much spectrum in those areas and therefore there would not be sufficient competition for new third generation high-speed data services. Competitive Impact Statement at 14-15, *United States et al. v. Cingular et al.* (D.D.C. filed Oct. 29, 2004) (No. 04-1850).

for example, higher-frequency spectrum may be just as effective as low-frequency spectrum. Therefore, the Department believes it is important to consider the differing characteristics of spectrum in determining its contribution to a carrier's competitive position.

The value of any particular block of spectrum also depends on the availability of networking equipment and consumer devices that support the use of that spectrum. When new spectrum first becomes available, it may be years before original equipment manufacturers can accommodate the spectrum in handsets. Because supporting each additional spectrum band class adds weight and cost to consumer devices, carriers usually seek to meet their capacity needs using as few different types of spectrum as possible. For the same reason, carriers may favor spectrum that is harmonized with the frequencies used by carriers in other countries, so that customers may continue to use their devices when travelling internationally. In addition to differences in propagation and device availability, spectrum can have a number of other characteristics that affect its value to a carrier, such as differing interference problems or regulatory obligations.

#### **IV. Technical Considerations for Competitive Analysis of Wireless Markets**

##### **A. Considerations for Analyzing the Competitive Significance of Spectrum**

###### **1. Carriers will be most competitive with at least some low-frequency spectrum to provide a good coverage layer**

As noted above, different bands of spectrum have characteristics that may have a crucial bearing on how the allocation of spectrum affects the competitive landscape. In particular, the propagation characteristics of low-frequency spectrum permit better coverage in both rural areas and building interiors. In previous wireless investigations, the

Department has paid careful attention to whether merging wireless carriers had a particularly strong position in low-frequency spectrum.<sup>20</sup> This factor is particularly important for determining a carrier's ability to compete in offering coverage across a broad service area, including its ability to provide coverage efficiently in rural areas. As such, the Department believes it is important that the Commission devise policies that address the allocation of low-frequency spectrum in particular so that acquisitions of such spectrum do not hamper the ability of carriers to compete in markets where that spectrum is important. Particularly if low-frequency spectrum remains scarce, the Commission must ensure that the allocation of spectrum at auction does not enable carriers with high market shares to foreclose smaller carriers from improving their customers' coverage. Today, the two leading carriers have the vast majority of low-frequency spectrum,<sup>21</sup> whereas the two other nationwide carriers have virtually none. This results in the two smaller nationwide carriers having a somewhat diminished ability to compete, particularly in rural areas where the cost to build out coverage is higher with high-frequency spectrum.<sup>22</sup> The Commission's policies, particularly regarding auction of new low-frequency spectrum, can potentially improve the competitive landscape by preventing the leading carriers from foreclosing their rivals from access to low-frequency spectrum.

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<sup>20</sup> See, e.g., Competitive Impact Statement at 10, *United States, et al. v. Verizon Commc'n Inc. and Alltel Corp.* (D.D.C. filed Oct. 30, 2008) (No. 08-1878) (noting that the merging parties owned the only two 850 MHz cellular licenses—the only low-frequency spectrum in use at the time—in a number of areas, and thus were one another's closest competitors for a significant number of customers in those markets).

<sup>21</sup> According to the most recent Commission report, the two leading carriers have 78% of low-frequency (cellular and 700 MHz) spectrum. See *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, WT Docket No. 10-133, Fifteenth Report, 26 FCC Rcd 9664, ¶ 298 (2011). Even this may underestimate the dominant position the two leading carriers hold in low-frequency spectrum given that the figure does not account for more recent transactions, and that there are interference and other concerns with a significant portion of the 700 MHz spectrum held by other carriers.

<sup>22</sup> A lack of low-frequency spectrum may also impair the ability of a local or regional carrier to provide an additional, significant, competitive option in particular local areas.

**2. There are cost efficiencies associated with owning larger blocks of spectrum**

Although a wireless carrier with a large market share may have the ability and incentive to harm competition by buying up significant quantities of spectrum independent of its need for that spectrum or its intention to use it in a timely manner, as described above, the Department also recognizes that there may be substantial efficiencies associated with ownership of relatively large blocks of spectrum. Specifically, due to the nature of wireless technology, for example, twice the spectrum may under certain conditions provide over twice the amount of capacity.

Similarly, there may be capital cost efficiencies associated with deploying larger blocks of spectrum. Running a wireless network typically involves high fixed capital investments in towers and radio equipment and comparatively lower costs on the ongoing maintenance and operation of the network.<sup>23</sup> Even if a carrier has not yet identified a use for specific spectrum to accommodate its customers' data consumption, deploying the spectrum can provide a significant increase in user throughput at relatively low cost.

Thus, the Commission should develop policies on spectrum holdings with the above considerations in mind, but should not needlessly prevent carriers from assembling spectrum portfolios that can take advantage of these efficiencies.

**3. The efficiencies associated with owning larger blocks of spectrum taper off**

However, the benefits of large blocks of spectrum may become more limited for larger and larger blocks of spectrum. For instance, although in some circumstances a carrier may be able to add incremental spectrum to existing cell sites to provide a

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<sup>23</sup> Some capital equipment, for example, base station controllers, can accommodate significant spectrum bandwidth at little or no incremental cost.

significant increase in capacity and peak user throughput at very low cost, beyond a certain point, deploying more spectrum may require sizeable investments in equipment at each site. Without a pressing capacity need, carriers may have limited incentive to incur the incremental costs of fully deploying such great quantities of spectrum and may instead leave some of it unused solely to keep it from rivals.<sup>24</sup>

Over time, the Department expects that carrier aggregation technology currently under development will permit wireless carriers to realize some of the efficiencies described above even with small, non-contiguous blocks of spectrum in different bands. This technology will enable carriers to achieve many of the capacity and peak throughput advantages previously attainable only with large blocks of contiguous spectrum by instead pairing small blocks of spectrum currently being used for older technologies with relatively small blocks of newly-allocated spectrum. Accordingly, larger incumbent carriers may be able to take significant advantage of economies of scale by acquiring relatively small blocks to pair with their existing holdings rather than acquiring large contiguous blocks. The Commission, therefore, may want to enable the acquisition of such smaller blocks even if it seeks to restrict the acquisition of larger blocks.

#### **B. Measuring and Balancing Efficiencies**

In addition, the Commission should consider the serious potential, described above, that carriers with large market shares could pursue an input foreclosure strategy at auction. We urge the Commission to weigh the risk of consumer harm from an input foreclosure strategy. Economies of scale should be balanced against those risks.

In numerous wireless transactions, including most recently in the proposed

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<sup>24</sup> Cf. *In re Applications of Cellco Partnership d/b/a Verizon Wireless and SpectrumCo LLC and Cox TMI, LLC*, FCC Docket No. 12-175, ¶¶ 108-109 (released Aug. 23, 2012) (questioning whether Verizon Wireless would use more than 40 MHz of AWS spectrum in any market in the near term).

AT&T/T-Mobile merger and Verizon Wireless's acquisition of spectrum from a consortium of cable companies, the Department carefully considered assertions that the economies of scale arising from greater spectrum concentration will ultimately yield substantial benefits for consumers. As in any transaction, the key to this analysis is whether the efficiencies that could be realized as a result of the acquisition would reduce the marginal cost of service sufficiently to outweigh the often substantial benefits of additional competition.<sup>25</sup> Notably, the economies of scale often present in wireless networks are significantly tempered compared to those the Department has encountered when analyzing competition among wireline networks, since it is easier and less costly to expand capacity over a fixed amount of spectrum than it is, for example, to reduce the cost of constructing the physical "last-mile" link to each premises.<sup>26</sup>

Therefore, in the Department's experience in these and other matters, it is important that the efficiencies described above are assessed accurately, including accounting for all alternative means for carriers to use their existing spectrum resources to expand capacity or launch new services. For example, in the course of investigating the proposed transaction between AT&T and T-Mobile, the Department cast doubt on the parties' claims that there were few alternatives to deal with spectrum shortages. Since abandoning the transaction, both companies have announced plans to deploy LTE more extensively than they had earlier suggested would be possible by, for instance, deploying spectrum previously dedicated to older technologies.

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<sup>25</sup> See U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES § 10 (2010), available at [www.usdoj.gov/atr/public/guidelines/hmg-2010.pdf](http://www.usdoj.gov/atr/public/guidelines/hmg-2010.pdf) (hereinafter Merger Guidelines).

<sup>26</sup> See U.S. Dep't of Justice Broadband Comments, at 13-14 (noting that "[t]he enormous sunk cost of wireline broadband networks makes it unlikely that additional wired broadband competitors will enter many geographic areas" but that "the sunk costs associated with deploying [wireless] networks are far less than those for wireline facilities").

As stated above, spectrum is a scarce resource and a key input for mobile wireless services. The Commission has an opportunity through its policies on spectrum holdings to preserve and promote competition and to ensure that the largest firms do not foreclose other rivals from access to low-frequency spectrum that would allow them to improve their coverage and make them stronger, more aggressive competitors.

#### C. The Appropriate Market Analysis for Promoting Competition

The Commission is seeking comment on the appropriate product and geographic markets for evaluating wireless spectrum holdings, and specifically whether it should modify the relevant market definition to reflect differentiated service offerings, devices, and contract features.

The Department evaluates mergers under Section 7 of the Clayton Act, which prohibits acquisitions the effect of which “may be substantially to lessen competition, or to tend to create a monopoly.” The Department analyzes wireless mergers essentially the same way it does transactions in other industries, as explained in the *Horizontal Merger Guidelines* jointly issued by the Department of Justice and Federal Trade Commission. The Department’s legal role is fundamentally one of enforcement, on a case-by-case basis, rather than an exercise in prospective rule-making, and it investigates mergers when they are proposed and examines the specific circumstances surrounding each transaction.

The Department believes that competition typically is best served by a thorough, case-by-case analysis of the competitive effects of each transaction. In past proceedings, the Department has recommended that the Commission develop a classification for evaluating the degree of competition in different markets using a method of analysis

similar to that set forth in the *Horizontal Merger Guidelines*.<sup>27</sup> Over time, the Commission and the Department have aligned more closely their respective processes for analyzing transactions.

As part of its review of each transaction, the Department considers any and all factors relevant to the question of whether a transaction may give the parties the ability to exercise market power in any relevant antitrust market. Under the *Horizontal Merger Guidelines*, the touchstone for this inquiry should be the functional experience from the perspective of the customer, not the particular technologies used by the provider. Thus, when the Department evaluates a “market” for antitrust purposes, it assesses the extent to which consumers view various services as substitutes.<sup>28</sup> As the Department explains in the *Guidelines*, this involves defining the relevant geographic and product markets for the transaction.

For many wireless transactions, the Department has identified geographic areas of concern for mobile wireless telecommunications services via a fact-specific, market-by-market analysis. This analysis has included consideration of a number of factors, including, but not limited to, the number of mobile wireless service providers and their competitive strengths, weaknesses, and market shares; whether additional spectrum is likely to be currently or imminently available; whether any providers are limited by insufficient spectrum or other factors in their abilities to add new customers; the breadth and depth of coverage by different providers in each area and in surrounding areas; each carrier’s network coverage in relation to the population density of the license area; each provider’s retail presence; local wireless number portability data; the likelihood that any

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<sup>27</sup> U.S. Dep’t of Justice Broadband Comments, at 13. A screen on spectrum consolidation in conjunction with a case-by-case analysis can also be effective.

<sup>28</sup> Merger Guidelines § 4.

provider would expand its existing coverage or that new providers would enter; and other market characteristics.<sup>29</sup>

Generally, mobile wireless telecommunications services are sold to consumers in local markets, though these markets are affected by nationwide competition among the larger service providers. It is therefore appropriate both to identify local markets and to identify the nature of nationwide competitive effects affecting local markets. In its wireless investigations, the Department has typically considered the Cellular Market Areas (CMAs) that the Commission has identified and used to license mobile wireless services for certain spectrum bands as approximations of the local areas within which customers have the same competitive choices.<sup>30</sup>

In recent investigations of transactions involving mobile wireless carriers, the Department has defined mobile wireless telecommunications services as a relevant product market. For example, in its lawsuit challenging AT&T Inc.'s proposed acquisition of T-Mobile USA, Inc., the Department found that there are no cost-effective alternatives to mobile wireless telecommunications services: because neither fixed wireless services nor wireline services are mobile, they are not regarded by consumers of mobile wireless telecommunications services as reasonable substitutes.<sup>31</sup> However, because markets are dynamic, so are definitions of antitrust product markets: as wireless services have expanded to include offerings such as broadband access, consumer demand for new services can dictate different relevant product markets. This is one way the Department's

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<sup>29</sup> See, e.g., Competitive Impact Statement at 10, *United States, et al. v. Verizon Commc'n Inc. and Alltel Corp.* (D.D.C. filed Oct. 30, 2008) (No. 08-1878).

<sup>30</sup> See, e.g., Complaint at 9-10, *United States et al. v. AT&T Inc., T-Mobile USA, Inc. and Deutsche Telekom AG* (D.D.C. filed Sep. 30, 2011) (No. 11-1560); Complaint at 7, *United States v. Verizon and Alltel* (D.D.C. filed Oct. 30, 2008) (No. 08-1878).

<sup>31</sup> Complaint at 7, *United States v. AT&T and T-Mobile*.

competitive analysis accounts for changes in technology and consumer demand.

In addition, for some matters the Department also has considered whether business or government customers constitute a distinct set of customers. (In various industries, the Department has denoted such customers as “enterprise customers.”) For these customers, in addition to effects in local markets, the Department also analyzes the extent to which such customers value a carrier that can provide services to employees, facilities, and devices that are geographically dispersed, including whether these customers require services that are national in scope. As such, the Department considers the potential for transactions to have broader geographical competitive effects, including at a national level. Consequently, the same transaction can require competitive analysis in both local markets and regional or national markets to ensure competition is fully protected.<sup>32</sup>

#### **D. Spectrum Allocation Should Provide Certainty and Predictability**

The Commission is seeking comment on whether a case-by-case analysis affords auction participants sufficient certainty to determine whether they would be allowed to hold a given license post-auction. In considering the appropriate policy for evaluating purchases at auction, the Commission should weigh the time and resources involved in conducting a thorough case-by-case review against the advantages to competition of a quick allocation of spectrum pursuant to an easily administered rule. Secondary market transactions typically come before the Commission and the Department one at a time, permitting staff to carefully evaluate the likely competitive consequences of the transaction. However, a case-by-case review of every acquisition by a winning bidder in a

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<sup>32</sup> Complaint at 8, *United States v. AT&T and T-Mobile*; see also Competitive Impact Statement at 10, *United States v. Verizon and Alltel*; Competitive Impact Statement at 11, *United States, et al. v. Verizon Commc'n Inc., CellCo P'ship d/b/a Verizon Wireless, Comcast Corp., Time Warner Cable Inc., Cox Commc'n, Inc., and Bright House Networks, LLC* (D.D.C. filed Aug. 16, 2012) (No. 12-1354).

large auction could strain the agencies' resources and delay the quick allocation of spectrum critical for innovation and increased competition. As the Commission has found, the exploding demand for wireless broadband use and the time and resources historically involved in allocating spectrum to new use urge a more expedient process that increases clarity and predictability.<sup>33</sup> Therefore, in allocating spectrum at auction, the Commission's approach should reduce the time to make available scarce, much-needed spectrum while also preventing the transfers most likely to harm competition and minimizing the potential risk that procompetitive acquisitions would be erroneously prevented.

Moreover, for spectrum auctions the Department believes that predictability is especially important. On the occasions that the Commission auctions off significant quantities of spectrum—with different frequency bands auctioned by different geographic boundaries—the Commission may put specific regulatory restrictions on the use of some bands of spectrum being auctioned, but not on others. In addition, the value to any wireless carrier of any particular spectrum license depends in part on how complementary that license is to the carrier's other wireless holdings. For example, operating a network using too many different spectrum band classes increases the cost of handsets and radio network equipment, since the devices require hardware to support all of the band classes. Carriers also seek enough spectrum to meet their needs in all of the geographic areas within their networks.

For these reasons, before crafting a bid on one license in an auction, a wireless carrier considers all alternative licenses available and the likelihood that the carrier may be able to purchase any of those licenses. A carrier might, for example, be willing to bid

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<sup>33</sup> FED. COMM'CNS COMM'N, CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN 79 (2010) (highlighting that reallocations of spectrum historically have taken 6-13 years); *see also* FCC National Broadband Plan, September Commission Meeting, at 63, 66, 71, 73-74 (Sept. 29, 2009).

more on a particular block of spectrum if it knows it will also be permitted to acquire an adjacent block. Alternatively, if a carrier knows in advance it will only be permitted to purchase one of the available blocks of spectrum, it may be willing to bid higher to ensure that it is able to secure the block most complementary to its existing holdings. These complex interdependencies demonstrate that carriers' certainty of what spectrum they will be permitted to acquire can have a significant effect about whether the spectrum auction can achieve allocations that best serve the public interest.

Therefore, the Department believes that a set of well-defined rules for spectrum acquisitions in auctions would best serve the dual goals of putting spectrum to use quickly and promoting competition in wireless markets.<sup>34</sup> Such rules could both provide predictability and prevent foreclosure of entry or expansion. Given the characteristics of different spectrum bands, as discussed above, different rules, weights, or caps could, for example, apply based on the kinds of spectrum frequency put up for auction. For instance, rules that ensure that the two smaller nationwide carriers are not foreclosed from access to more spectrum, and particularly low-frequency spectrum, could benefit consumers. Auction rules of this nature would ensure the smaller nationwide networks, which currently lack substantial low-frequency spectrum, would have an opportunity to acquire it. Such an outcome could improve the competitive dynamic among nationwide carriers. As such, using a pre-announced set of rules would allow the Commission to realize substantial benefits to competition from quick allocation of new spectrum while minimizing the potential risk that procompetitive acquisitions would be prevented.

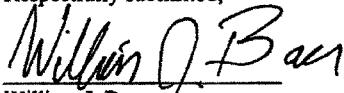
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<sup>34</sup> In the context of mergers and other secondary market transactions, spectrum guidelines or screens can provide useful guidance while maintaining the flexibility inherent in a case-by-case analysis. See *supra* Part IV.C.

**V. Conclusion**

In this proceeding, the Commission reaffirms its interest in crafting rules that address spectrum aggregation in a manner that promotes competition and innovation in telecommunications markets. The Department strongly supports this effort, and commends the FCC in taking on this comprehensive review of its mobile spectrum holdings policies as it also moves to reallocate a considerable array of spectrum to make it available for mobile wireless services. The Department looks forward to working with the Commission in this and other proceedings as the Commission develops policies that ensure that the allocation of spectrum continues to support growth and innovation in the nation's economy.

Respectfully submitted,



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Attorneys

William H. Gillespie  
Economist

April 11, 2013

**Congress of the United States**  
**Washington, DC 20515**

July 16, 2013

The Honorable Mignon Clyburn  
Acting Chairwoman  
U.S. Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Dear Acting Chairwoman Clyburn:

We write concerning the Commission's implementation of the spectrum auction authorized by section 6403 of the Middle Class Tax Relief and Job Creation Act of 2012 ("the Act"). In carrying out that section, the Commission will play a critical role in determining whether the Act achieves one of its intended primary objectives: funding of the construction of a nationwide interoperable public safety communications network, also known as FirstNet. Our purpose in writing you is to encourage you and your colleagues to adopt rules that will achieve this important congressional objective.

Congress passed the Act in order to achieve several distinct and important goals. First, the Act is designed to alleviate the spectrum shortage that now constrains wireless providers' ability to meet consumer demand. Second, the Act incents broadcasters to participate in the auction by permitting them to receive a portion of the auction proceeds when their frequencies are acquired by wireless providers. Third, the Act contains provisions to compensate broadcasters which do not participate in the auction for the costs involved in moving to new channel assignments in order to maximize the amount of spectrum available for mobile broadband services. Fourth, Congress provided that up to \$7 billion of the proceeds from the auction will be used to fund the construction of FirstNet. Finally, Congress intended that the auction generate sufficient revenues to make a meaningful contribution to reducing the national deficit.

Congress is relying upon the Commission to ensure that each of these important goals is met. The Commission faces an enormously complex task of adopting technical and auction design rules to make certain that the auction authorized by the Act serves the interests of broadcasters, wireless providers, public safety, and the American public. Doing so may well entail compromises, but we urge you not to adopt policies in this or any other proceeding that will jeopardize the ability of the auction to generate winning bids that are sufficient to fund each of these important public policy goals.

In closing, we hope the Commission will avoid any action that would serve as an impediment to the successful build-out of FirstNet. More specifically, we are concerned that the Commission may take action which would have the effect of excluding entities in the forward auction authorized by the Act. All carriers should have a meaningful opportunity to bid for spectrum. Since September 11, 2001, Congress, the Commission, the 9/11 Commission, and others have recognized the urgent need for nationwide interoperable public safety communications. Nearly 12 years later, however, we have failed to achieve this goal. Indeed,

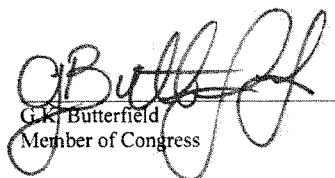
The Honorable Mignon Clyburn  
Page 2

the Commission's prior effort to auction the Upper 700 Megahertz D Block spectrum for public safety use failed due to overly complex and uncertain auction rules adopted by the Commission. We very respectfully request that the Commission avoid repeating that mistake in carrying out the Act's forward auction. Instead, we hope that the Commission will adopt transparent and simple rules to encourage participation by the broadest possible group of broadcasters and wireless providers because doing so will contribute in great part to a successful auction that, in turn, will generate the revenues needed to fulfill our shared commitment to public safety and achieve the other goals of the Act.

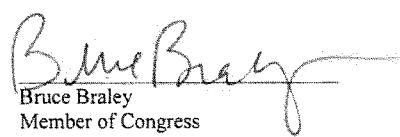
Sincerely,

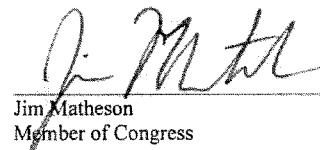
  
John D. Dingell  
Member of Congress

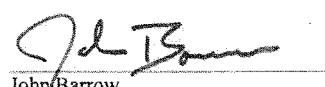
  
Eliot L. Engel  
Member of Congress

  
G.K. Butterfield  
Member of Congress

  
Gene Green  
Member of Congress

  
Bruce Braley  
Member of Congress

  
Jim Matheson  
Member of Congress

  
John Barrow  
Member of Congress

  
Paul Tonko  
Member of Congress



July 22, 2013

The Honorable Greg Walden  
U.S. House of Representatives  
2182 Rayburn House Office Building  
Washington, DC 20515

The Honorable Anna Eshoo  
U.S. House of Representatives  
241 Cannon House Office Building  
Washington, DC 20515

Dear Chairman Walden and Ranking Member Eshoo:

The Telecommunications Industry Association (TIA), the leading trade association for global manufacturers, vendors, and suppliers of information and communications technology, wishes to thank you for holding an oversight hearing this week regarding the FCC's implementation of voluntary incentive auctions. We urge you to focus on the following areas:

*Ensuring Prompt Action.* Congress should continue to press the FCC to ensure that the voluntary incentive auction be conducted by the end of 2014. Speedy action by the FCC is necessary simply to keep pace with the exploding demand for commercial wireless services, as well as to support the timely deployment of the nationwide interoperable public safety broadband network – a network that will itself harness the benefits of wireless broadband technology for first responders and other public officials.

*Maximizing Licensed Spectrum.* The FCC should develop a spectrum “re-packing” plan that maximizes the amount of spectrum available at auction for licensed mobile services. In doing so, the FCC must abide by Congress’ mandate that guard bands be minimized so that they are no larger than is technically reasonable to prevent harmful interference between licensed services.

*Simplifying Auction Rules and Broadcaster Education.* The reverse auction rules should be as simple as possible to attract the greatest possible number of broadcast participants. In advance of the auction, the FCC should educate broadcasters on their options, paying particular attention to broadcasters in the nation’s largest cities where spectrum needs are most critical. The spectrum law gives the agency only one chance to “get this right.”

*Allowing Broad Participation.* The success of the incentive auction ultimately hinges on the participation of all possible bidders in the forward auction. The FCC should not limit the eligibility of participants, and the rules should also provide for the earliest possible repacking / reclaiming of the broadcast spectrum. This is essential to ensure that the auction will raise sufficient funds for the public safety network.

For more information, please contact Danielle Coffey at (703)-907-7734 or by email at [dcoffey@tiaonline.org](mailto:dcoffey@tiaonline.org). TIA once again thanks you for holding this important oversight hearing.

Sincerely,

A handwritten signature in black ink, appearing to read "Grant E. Seiffert".

Grant E. Seiffert  
President

FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
 COMMITTEE ON ENERGY AND COMMERCE

2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115

Majority (202) 225-2927  
Minority (202) 225-3841

September 5, 2013

Mr. Gary Epstein  
Senior Advisor and Co-Lead, Incentive Auction Task Force  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

Dear Mr. Epstein:

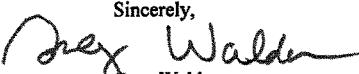
Thank you for appearing before the Subcommittee on Communications and Technology on Tuesday, July 23, 2013, to testify at the hearing entitled "Oversight of Incentive Auction Implementation."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions by the close of business on September 19, 2013. Your responses should be e-mailed to the Legislative Clerk in Word format at Charlotte.Savercool@mail.house.gov and mailed to Charlotte Savercool, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

  
Greg Walden

Chairman  
Subcommittee on Communications and Technology

cc: Anna Eshoo, Ranking Member, Subcommittee on Communications and Technology

Attachment

The Honorable Greg Walden

- 1. Will the auction design automatically yield higher prices for stations with significant repacking/clearing impact and lower prices for stations with less significant repacking/clearing impact? If so, would that obviate the need for FCC “scoring”? What is the significance of artificial measurements, such as population served, when it comes to spectrum that will be resold in blocks without regard to these factors?**

Scoring is a term for a possible auction design approach that could be used to increase the ability of the reverse auction to select bids that contribute the most to the recovery of spectrum, the generation of revenue in the forward auction, and the successful close of the incentive auction. While the Commission has reached no final conclusions with respect to auction design, without a scoring system, a descending clock auction would treat bids in the order of their individual self-evaluations, without reference to the effect of a bidder exiting the auction on repacking stations and clearing spectrum in subsequent auction rounds. By accounting for the impact that bidders would have on repacking and clearing in subsequent auction rounds, scoring could decrease the overall cost of clearing spectrum, while simultaneously increasing the amounts received by bidders with the most significant impacts on repacking and clearing. The Commission is studying a broad range of possible scoring metrics in order to determine those metrics that best reflect the impact of bids on repacking and clearing in later rounds. The Commission has reached no conclusions about the use of scoring metrics.

The Honorable Renee Ellmers

- 1. While I was serving on the conference committee that used this spectrum auction to pay for parts of deficit reduction, I remember there were different opinions about how much we might actually raise. While the Spectrum Act anticipates that this auction will derive about \$27.95 billion with about \$20.4 billion attached to deficit reduction, I am still wondering how much we think we will actually be able to raise. Do you think this estimate is on the mark? As you are working on the rules to design the auction, what factors are you considering to be the most important? Are you focusing on maximizing revenue or something else?**

The Spectrum Act requires the proceeds of the auction to be sufficient to pay: (1) the successful bidders in the reverse auction, (2) the FCC's administrative costs of conducting the auction, and (3) up to \$1.75 billion to reimburse costs reasonably incurred by eligible broadcasters who are reassigned to new channels following the auction. The statute also directs that, once these three prerequisite revenue conditions are met, net proceeds from the auction be deposited into the Public Safety Trust Fund and used to fund FirstNet, Next Generation 911 and for deficit reduction. The Commission's Incentive Auction Task Force is working hard to present recommendations to the Commissioners which will result in an auction that will meet Congress' direction with respect to revenues, unleash significant amounts of spectrum for licensed and unlicensed flexible use, while preserving a healthy and diverse broadcast television service. Our goal is to ensure that the auction elicits broad, robust broadcaster and wireless carrier participation. Ultimately, the total amount of money the incentive auction raises will depend on the market.

FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS  
**Congress of the United States**

**House of Representatives**

COMMITTEE ON ENERGY AND COMMERCE

2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115

Majority (202) 225-2927  
Minority (202) 225-3641

September 5, 2013

Mr. Harold Feld  
Senior Vice President  
Public Knowledge  
1818 N Street, N.W., Suite 410  
Washington, D.C. 20036

Dear Mr. Feld:

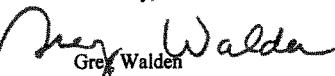
Thank you for appearing before the Subcommittee on Communications and Technology on Tuesday, July 23, 2013, to testify at the hearing entitled "Oversight of Incentive Auction Implementation."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

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Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

  
Greg Walden  
Chairman  
Subcommittee on Communications and Technology

cc: Anna Eshoo, Ranking Member, Subcommittee on Communications and Technology

Attachment

Mr. Harold Feld  
 Senior Vice President  
 Public Knowledge  
 1818 N Street, N.W., Suite 410  
 Washington, D.C. 20036

**The Honorable Anna Eshoo**

1. You stated in your testimony that “the overwhelming advantage of AT&T and Verizon” in having spectrum located below 1 GHz means a “long, slow slide to duopoly.” Can you elaborate on what you mean by that?

Lowband spectrum provides unique advantages. In particular, lowband spectrum penetrates buildings and other natural obstacles. In densely populated urban areas, lowband spectrum allows carriers to reach subscribers inside buildings and deep in the “concrete arroyos” of modern streets. In more rural areas, the ability lowband spectrum to penetrate foliage and curve around terrain makes the cost of rural deployment significantly lower and enables the carrier to remain in contact with the subscriber.

In the absence of lowband spectrum, competitors are unable to provide reliable “always on” service in urban and rural areas comparable to that of AT&T and Verizon. In addition, the lack of lowband spectrum drives up the cost of network deployment. While there are some technical tricks that can help to compensate for this disadvantage, they require both significantly more higher band spectrum, combined with significant and expensive changes in network architecture. Even then, however, the advantages of lowband spectrum cannot be entirely overcome.

Because competing carriers cannot offer a network as reliable as that of AT&T and Verizon with their abundance of lowband spectrum, the competing carriers must offer their service at a lower price. But the absence of lowband spectrum actually increases the cost of deployment. This creates an inherently unsustainable situation, which must result in AT&T and Verizon steadily buying out their competitors and further increasing their advantage until no competitors remain.

2. In July, West Virginia University became the first university in the country to use “TV White Spaces” to deliver wireless broadband service across their campus. Without a nationwide block of unlicensed spectrum under 1 GHz, do you believe universities in dense urban areas like San Francisco or New York could offer such innovative services to their students and faculty?

I do not believe it is possible for colleges and universities to offer such innovative services without a nationwide block of unlicensed spectrum under 1 GHz. As discussed above in response to Q1, lowband spectrum has unique physical properties that make it ideally suited to mobile broadband, particularly in urban areas. The limited range and

inferior propagation characteristics of other unlicensed bands – including the 5 GHz now under consideration for unlicensed – do not enable services such as these in urban areas because these frequencies cannot penetrate buildings.

Even in rural areas, higher frequency would make it difficult or impossible for colleges and universities to offer such services. Higher frequencies experience “tree fade,” degradation of the signal when passing through foliage. For the same reasons that lowband spectrum is critical to competition in the licensed space, lowband spectrum is equally critical for innovation and affordable service in the unlicensed space.

In addition, what is critically important about “unlicensed spectrum,” as opposed to spectrum licensed for exclusive use, is that it is open for innovation by anyone, and free for anyone to deploy whatever equipment is certified by the FCC, for any purpose. By contrast, licensed spectrum is under the exclusive control of the licensee.

The result is that unlicensed allows for innovation, particularly of general use technology like WiFi and TVWS. Once these become available to the public, economies of scale make the equipment for deployment increasingly affordable, driving further innovation.

What is critical, however, is that the spectrum be available on a *national* basis to enable economies of scale. If unlicensed spectrum is not available on a national basis, particularly in urban areas where most potential customers live, it is impossible to develop economies of scale. Indeed, in the absence of urban markets, it may be practically impossible to attract development at all. But even if development occurs for specific uses, the limited number of markets assures that equipment would be far too expensive for colleges and universities to deploy innovative services.

The evolution of traditional WiFi illustrates both the evolution of a general purpose application on unlicensed spectrum and the need for a national band to promote economies of scale. The FCC opened the first unlicensed bands in 1989, primarily for devices such as garage door openers and remote control devices. As the Internet revolution grew in the 1990s, it became clear that wireless networking would have enormous benefits. Because unlicensed spectrum was available for use without permission on a national basis, the IEEE developed the protocols for WiFi on these bands. Chip manufacturers began incorporating the new WiFi into devices for wireless networking at a time when in the licensed space economic factors drove carriers – and therefore wireless equipment makers – to focus exclusively on voice. The proliferation of chips for laptops and printers drove down the price, making WiFi affordable for home use. As chips became ever cheaper because of the economies of scale, people found more innovative uses for them. This virtuous cycle was only possible because the national availability of a block of unlicensed spectrum allowed manufacturers to make products they could sell anywhere in the country to anyone.

Contrast this to the more limited 3.65 GHz band, the “licensed lite” band used primarily by wireless Internet service providers (WISPs). It had been hoped that in addition to higher-power equipment for WISP use, manufacturers would put lower-power chips in

laptops to repeat the virtuous cycle of Wi-Fi. But the 3.65 GHz band has large exclusion zones to protect certain users. As a result, no one can use 3.65 GHz in the Northeast, along the West coast, or in the Great Lakes region. Without access to the largest markets in the United States, device manufacturers have had no interest in developing chips for lower-power mobile 3.65 GHz use. Rather than evolve as a general purpose technology, the 3.65 GHz band has remained limited primarily to rural WISPs.

The future of the TVWS in the United States, for colleges and universities and everyone else, depends on the availability of a sufficient national spectrum block open for TVWS. Happily, with proper planning, this can be achieved.

#### The Honorable Henry Waxman

1.     **The FCC has been criticized by NAB and AT&T for putting out a public notice seeking additional comment on band plans because it seemed to be ignoring an “industry consensus” on what the band should look like. Do you agree that there is a consensus band plan?**

There is no consensus plan. To the contrary, while many commenters have expressed criticism of certain proposed plans, there is no consensus around an actual band plan. This criticism of the FCC is entirely unjust and seems to derive from some confusion over the FCC’s proper steps to comply with Administrative Procedure Act and develop a more complete record.

In the Public Notice seeking further comment on the Band Plan (“Band Plan Public Notice”) issued by the Wireless Bureau on May 17,<sup>1</sup> the Bureau noted certain limited points of common agreement among the majority of commenters. Specifically, as the Public Notice clearly stated, there was widespread criticism of the initial plan proposed in the Notice of Proposed Rulemaking.

The Band Plan Public Notice then observed that while there had been widespread criticism of some aspects of the initial plan, there was no consensus around a specific plan. The Band Plan Notice described certain positions from different commenters, including those of NAB, those of AT&T and Verizon, and those of competitive carriers such as Sprint and T-Mobile, rural carriers, and others. The Band Plan Notice also recited certain concerns on the part of staff in light of certain physical characteristics of the spectrum. The Band Plan Notice therefore sought comment on several new proposals.

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<sup>1</sup> Public Notice, “Wireless Telecommunications Bureau Seeks to Supplement The Record On 600 MHz Band Plan,” GN Docket No. 12-268 (May 17, 2013) available at: [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2013/db0517/DA-13-1157A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0517/DA-13-1157A1.pdf)

NAB, AT&T and others criticizing the Notice appear to have either mistaken this for an effort to rehabilitate the original proposal in the Notice of Proposed Rulemaking – which it clearly was not – or were seeking to browbeat staff into accepting their proposed band plan. But to claim that staff ignored a “consensus band plan” is simply false to fact.

Consensus around what elements of the initial proposed band plan the majority of carriers *reject* is not the same thing as consensus *for* a specific band plan. The Band Plan Public Notice clearly acknowledged the negative consensus, and also properly acknowledged there was no affirmative consensus for a specific band plan.

FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS  
**Congress of the United States**  
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September 5, 2013

Mr. Rick Kaplan  
Executive Vice President, Strategic Planning  
National Association of Broadcasters  
1771 N Street, N.W.  
Washington, D.C. 20036

Dear Mr. Kaplan:

Thank you for appearing before the Subcommittee on Communications and Technology on Tuesday, July 23, 2013, to testify at the hearing entitled "Oversight of Incentive Auction Implementation."

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Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

Greg Walden  
Chairman  
Subcommittee on Communications and Technology

cc: Anna Eshoo, Ranking Member, Subcommittee on Communications and Technology

Attachment

*Responses from Rick Kaplan to questions submitted subsequent to the July 23, 2013 hearing entitled, "Oversight of Incentive Auction Implementation."*

#### **Questions for the Record**

**The Honorable Henry Waxman**

- 1. NAB has highlighted the engineering challenges of employing market variability in the band plan. Could you please explain your concerns with market variability and also explain what the FCC should do to deal with the problem.**

I would like to thank the Subcommittee on Communications and Technology for the opportunity to testify at the July 23, 2013, "Oversight of Incentive Auction Implementation" hearing.

In my testimony, I highlighted the engineering challenges of incorporating "market variability" into the new post-auction 600 MHz band plan. Market variability is a concept whereby the Commission recovers different amounts of broadcast spectrum in different markets. While variable recovery does have a number of positives in theory, in practice it has the strong potential to create widespread harmful interference both to broadcasters and wireless carriers. This is because it requires, for the first time, broadcasters and wireless carriers to share channels in adjacent markets. So, for example, after the auction the FCC could license channel 47 to a high-power TV broadcaster in New York, but license that same channel to a wireless carrier in Philadelphia or New Haven. Without significant mitigation techniques – such as large geographic separation between the services – the result will be a serious impairment of both services.

As I explained in my testimony, due to the inherent interference challenges, I believe that the FCC should do everything it can to avoid using market variability. That approach introduces great complexity into the process and unnecessarily threatens harmful interference and/or will ultimately reduce the value of many licenses across the country.

Several factors animate our concerns with employing market variability. At the outset, if wireless carriers and television broadcasters are to share channels in adjacent markets (e.g., both on channel 47), the Commission must develop rather sizeable "separation distances" to protect one from the other. These protection zones are necessary because the only reliable technique to avoid or mitigate co-channel interference (i.e., interference between services sharing the same channel in adjacent markets) is geographic separation. To get an idea of the impact of market variability, NAB analyzed the separation distances (both co-channel and adjacent channel) required to avoid interference between wireless broadband and television broadcasts:

Wireless Band	Interference		Separation Distance Required to Mitigate Interference	
	From	To	Co-channel	Adjacent Channel
Uplink	Handset transmission	TV receiver	DTV contour + 5 km	DTV contour
	TV transmission	Base station receiver	225 to 375 km	100 to 130 km
Downlink	Base station transmission	TV receiver	150 to 225 km	90 to 130 km
	TV transmission	Handset receiver	130 to 150 km	90 to 130 km

As is apparent from the above chart, where wireless operation is contemplated on the same and/or adjacent channels(s) as broadcast service in adjacent markets, wireless operations will be severely curtailed. For example, in the case of TV stations operating co-channel with wireless carriers in adjacent markets, wireless base stations receivers will be limited to operating as much as 375 km away from the broadcast service. In practical terms, this means that the wireless licensee forced to operate co- or adjacent channel with a TV broadcaster will have a much smaller area, if any, in which it can provide service.

There are two additional elements that augment the challenge of accounting for market variability in the incentive auction context. First, a mismatch in "channelization" between broadcast channels and the future wireless channels means that more blocks of spectrum will be affected by a variable market plan. This is because, as envisioned by the Commission, the new 600 MHz wireless band will utilize 5 MHz channels for mobile broadband, while television broadcasting uses 6 MHz channels. This means that the channelization in any broadband band plan will not align with the current channelization used for digital television. The result is that most wireless carriers forced to share a channel with a broadcaster in an adjacent market will interfere with two TV channels and each TV channel will also cause co-channel interference to two wireless broadband channels (see Appendix A).

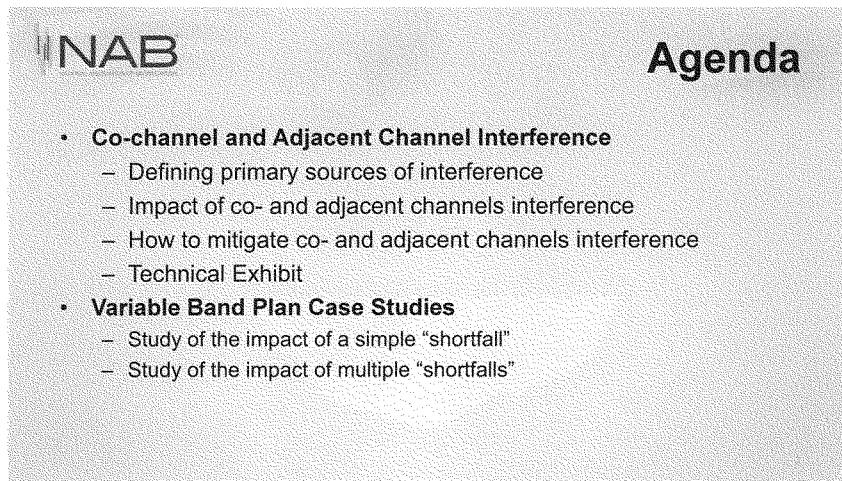
Second, because the service areas for broadband and broadcasting are different, there is a geographic mismatch between the licenses. In this instance, the FCC has proposed to license wireless broadband service on the basis of Economic Areas (EAs). EAs cover different areas than those served by TV stations (i.e., Designated Market Areas). Thus, if the FCC employs market variability, a television market could cover – and thus interfere with – multiple EAs rather than just a single one.

At bottom, these factors, taken together, mean that market variability is likely to impair a great number of licenses across the country. NAB's view is that this kind of impairment and complication threatens the prospects for a successful auction. Employing a national band plan, on the other hand – where all markets recover the same amount of spectrum – helps avoid all of these tricky interference difficulties. By removing these interference variables, we believe that the FCC can focus less on designing the most academically pleasing auction and more on one that will work and will raise the money necessary to help fund the public safety network without guaranteeing years of sorting out novel and difficult interference issues between and among broadcasters and wireless carriers.

NAB

## **APPENDIX A**

### Interference Challenges of a Variable 600 MHz Band Plan



The slide features the NAB logo on the left and the word "Agenda" in large, bold, black font on the right. The background is a light gray textured surface. The agenda items are listed below.

- **Co-channel and Adjacent Channel Interference**
  - Defining primary sources of interference
  - Impact of co- and adjacent channels interference
  - How to mitigate co- and adjacent channels interference
  - Technical Exhibit
- **Variable Band Plan Case Studies**
  - Study of the impact of a simple “shortfall”
  - Study of the impact of multiple “shortfalls”

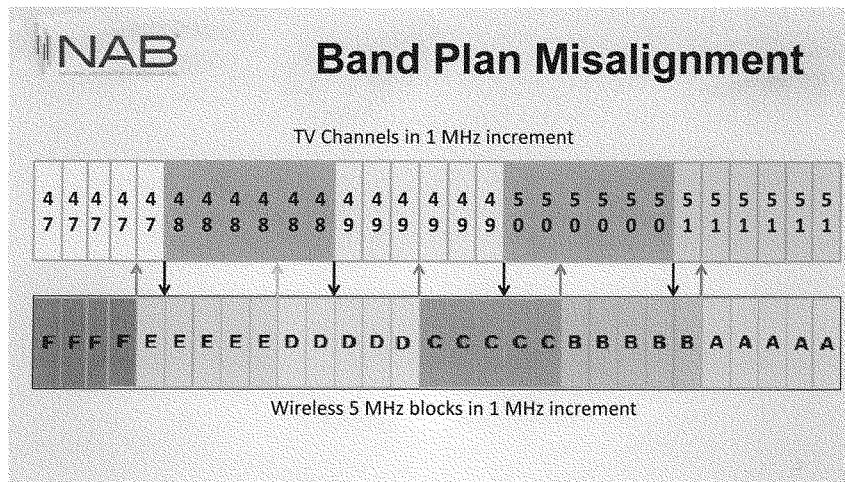
## NAB Defining Interference Cases

There are at least **two** types of interference that must be addressed under a variable band plan

1. Interference to DTV Reception
  - Interference to DTV receiver from handset uplink transmission
  - Interference to DTV Receiver from base station downlink transmission
2. Interference from DTV Transmission
  - Interference to base station receiver from DTV transmission on the uplink frequencies
  - Interference to handset receiver from DTV transmission on the downlink frequencies

## NAB Additional Factor: 5 MHz Blocks

- FCC plan to move from 6 MHz to 5 MHz blocks is complicated under a variable plan; it results in multiple TV channels or wireless blocks being affected
  - TV operation on a single channel will cause co-channel interference on two contiguous 5 MHz wireless blocks
  - Except for the first wireless block assigned next to 700 MHz A Block, a single 5 MHz wireless block operation will cause co-channel interference to two TV contiguous channels
  - Adjacent channel interference has a similar impact for television and wireless





## Mitigating Interference

- How might co- and adjacent channel interference be mitigated?
  - The only reliable technique is geographic separation
    - In terms of interference from wireless to DTV transmission
      - FCC Part 27 established a methodology to determine separation distances to prevent interference from wireless transmission to TV reception
    - In terms of interference from TV transmission to wireless receivers
      - No separation distances have been proposed or developed; distances are much larger than the reverse interference case



## NAB Interference Calculations

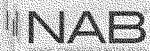
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*\*Note that the downlink separation distances will depend on power and height of base station and sensitivity and out-of band rejection characteristics of the handheld device*



## Interference Concerns Recognized

- Qualcomm calculates co-channel TV can cause interference to uplink operations located more than 310 miles or **500 km** away
  - Substantially limiting market variability in areas such as East coast
- CTIA states that extremely large separation distances will be needed to mitigate co- and adjacent channel interference
- CEA indicates that to the degree spectrum is encumbered by interference undercuts the utility of the spectrum and impacts the interchangeability of spectrum being auctioned
- AT&T states that required separation distances could significantly limit the ability to offer different amounts of spectrum on an EA-by-EA basis



## The NAB Plan

- After setting a reasonable spectrum acquisition target (e.g., between 60 and 84 MHz), lay out the various nationwide repacking scenarios to determine the areas in which the Commission must have volunteers and how many it needs
- Determine how much revenue will likely be raised from a forward auction of the target amount of spectrum
- Use those anticipated (and soon to be realized) funds to incentivize broadcasters in areas where spectrum is actually needed, and, where no volunteers are needed to achieve the nationwide goal, then simply repack broadcasters

FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS  
**Congress of the United States**  
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 2125 RAYBURN HOUSE OFFICE BUILDING  
 WASHINGTON, DC 20515-6115  
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 Minority (202) 225-3641

September 5, 2013

Mr. Preston Padden  
 Executive Director  
 Expanding Opportunities for Broadcasters Coalition  
 1301 Canyon Blvd., #306  
 Boulder, CO 80302

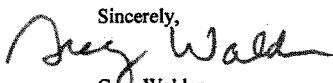
Dear Mr. Padden:

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Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,  
  
 Greg Walden  
 Chairman  
 Subcommittee on Communications and Technology

cc: Anna Eshoo, Ranking Member, Subcommittee on Communications and Technology

Attachment

**House Committee On Energy and Commerce****July 23, 2013 hearing of Subcommittee On  
Communications and Technology – “Oversight of  
Incentive Auction Implementation”****Questions For The Record for Preston Padden,  
Executive Director, Expanding Opportunities For  
Broadcasters Coalition****Question#1:**

You stated that broadcasters interested in relinquishing spectrum have concerns about auction participation restrictions. Please elaborate on potential spectrum sellers' interest in not limiting participation in the forward auction.

**Question # 2:**

Mr. Padden, do you believe the FCC should use any measurements or valuation to determine winning bids in the reverse auction? What will scoring do to broadcaster participation? Can you elaborate on other effects of "scoring" a bid?

**Combined Answer:**

The Expanding Opportunities For Broadcasters Coalition ("Coalition") is committed to working constructively with the FCC toward the goal of a successful Incentive Auction. The Coalition has confidence in the FCC's Auction Task Force, and we are very appreciative of the helpful information recently made available to broadcasters including the revised TV Study and the pair-wise station interference data.

The Coalition is concerned about three issues – (1) the lack of information about the prices the FCC intends to offer broadcasters in the reverse auction, (2) the proposal to "score" stations based on population covered or other station characteristic and (3) proposals to restrict auction participation by AT&T and Verizon in the forward auction. The Commission has not yet attracted anything close to the critical mass of willing seller broadcasters that will be required for a successful auction. All three of our concerns impact the level of broadcaster participation.

The key to attracting broadcasters to the auction (and thus having spectrum to auction) is the prospect of substantial payments – payments reflective of wireless, rather than broadcast, spectrum values. The FCC can afford to be generous in the relatively small number of markets where it will need to buy spectrum because it will reap the forward auction revenues from the vast majority of markets essentially

for free, paying only repacking costs. To date the FCC has not given broadcasters any concrete information about the level of payments they can expect and the Commission will not attract sufficient TV station participation until it does so.

The FCC's proposal to "score" stations based on population covered or other station characteristic is perceived by broadcasters as an economist's strategy to limit payments to some stations. This is discouraging, rather than encouraging, broadcaster participation. The FCC Staff has indicated that its interest in scoring is driven by a desire to pay more to those stations most important to clearing spectrum. The good news is that the Staff is working on a feasible and workable auction design that automatically will yield higher payments to those stations most important to clearing. The auction design accomplishes this by freezing at early, high-priced, rounds of the auction those stations most difficult to repack and hence most important to spectrum clearing. Under the auction design, stations easier to repack will descend to later, lower-priced, rounds of the auction. Thus the Staff can accomplish its goal of paying more to the stations most important to clearing without any need for scoring.

The Staff has indicated a desire to run simulations to determine what additional efficiency, if any, might be gained by adding scoring to the basic auction design. While that is a quite reasonable way to proceed, the Coalition urges the Staff, and ultimately the Commissioners, to weigh carefully any perceived increase in auction efficiency against the fact that scoring based on population or other station characteristic almost certainly will deprive the Commission of the critical mass of broadcasters it needs to make the auction a success.

Finally, the Coalition opposes proposals to limit auction participation by AT&T and Verizon. The Commission will need all the revenue it can get to pay exiting broadcasters, pay repacking costs for broadcasters remaining on the air, pay for FirstNet, pay other expenses and contribute to deficit reduction. Restricting AT&T and Verizon will reduce auction revenue. The Coalition understands that T-Mobile and Sprint would like to get spectrum for less than they would have to pay if they are required to bid against AT&T and Verizon. But, their objective is simply inconsistent with the Commission's funding responsibilities under the statute.

By conventional anti-trust standards, the wireless market is at least "workably competitive". And, recent marketplace developments have caused industry analysts to predict significant strengthening of T-Mobile and Sprint's competitive position. See, e.g., Joan Engebretson, *New Sprint, T-Mobile Plans Threaten AT&T, Verizon Dominance*, Telecompetitor (July 12, 2013, 10:55 a.m.), available at [http://www.telecompetitor.com/new-sprint-t-mobile-plans-threaten-att-verizon-dominance/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3AA+Telecompetitor%28Telecompetitor%29](http://www.telecompetitor.com/new-sprint-t-mobile-plans-threaten-att-verizon-dominance/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3AA+Telecompetitor%28Telecompetitor%29).

For all of the reasons above, the Coalition urges the FCC (1) to provide information to broadcasters about the prices it intends to offer in the reverse auction, (2) to not

"score" stations based on population or other station characteristic and (3) to not restrict AT&T and Verizon in the forward auction.

FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS

## Congress of the United States

### House of Representatives

#### COMMITTEE ON ENERGY AND COMMERCE

2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115

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Minority (202) 225-3941

September 5, 2013

Ms. Kathleen Ham  
Vice President, Federal Regulatory Affairs  
T-Mobile US, Inc.  
601 Pennsylvania Avenue, N.W.  
North Building, Suite 800  
Washington, D.C. 20004

Dear Ms. Ham:

Thank you for appearing before the Subcommittee on Communications and Technology on Tuesday, July 23, 2013, to testify at the hearing entitled "Oversight of Incentive Auction Implementation."

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Sincerely,

Greg Walden  
Chairman  
Subcommittee on Communications and Technology

cc: Anna Eshoo, Ranking Member, Subcommittee on Communications and Technology

Attachment

**T-Mobile®**

601 Pennsylvania Ave., NW  
Suite 800 – North Building  
Washington, DC 20004  
202-654-5900

September 18, 2013

The Honorable Greg Walden  
Chairman  
Subcommittee on Communications and Technology  
Committee on Energy and Commerce  
2125 Rayburn House Office Building  
Washington, DC 20515-6115

Dear Chairman Walden:

Thank you once again for the opportunity to allow me to testify before the Communications and Technology Subcommittee. I hope you found my testimony as valuable as I found the hearing to be.

Enclosed are my responses on behalf of T-Mobile US to the questions for the record, along with a chart that supplements my answer to the first submitted question.

Please let me know if you have any questions, and please don't hesitate to reach out if I, or anyone on T-Mobile's federal government affairs team, can be helpful to you.

Sincerely,



Kathleen O'Brien Ham  
Vice President, Federal Regulatory Affairs

Enclosure

**RESPONSES OF KATHLEEN O'BRIEN HAM TO QUESTIONS FOR THE RECORD  
FROM HON. ANNA ESHOO**

**1. In your testimony, you indicated that the two largest carriers received about half of their “beachfront” spectrum below 1 GHz for free from the government in the early 1980s when cellular licenses were handed out to the local telephone companies. AT&T disputed this statement at the hearing. Can you explain what you meant?**

AT&T's and Verizon's spectrum holdings below 1 GHz include 20 MHz of cellular spectrum in the 800 MHz band that was granted *for free* to the local Bell operating companies in each of their markets in 1981, and the additional 5 MHz of cellular spectrum granted to them *for free* in 1986. While it's true that the Bells have since supplemented their free spectrum by purchasing additional cellular licenses from their competitors, such as Metromedia and McCaw Cellular, those licenses were also originally issued *for free*. Attached to my answers is a brief history of AT&T's acquisitions of cellular spectrum.

**2. You testified that “beachfront” spectrum below 1 GHz is uniquely valuable, but AT&T argued that you were overstating the importance of this spectrum – that capacity, not coverage, is what is important. Can you explain the significance of spectrum below 1 GHz, even in urban areas where coverage may not be as much of an issue as in rural areas?**

Low-band spectrum is uniquely valuable because, in addition to providing superior rural coverage, it can penetrate buildings far better than high-band spectrum. Carriers need to be able to provide good in-building coverage in order to be able to compete effectively. That's true in urban and rural areas. The significance of reliable in-building penetration was reinforced by a recent Cisco study suggesting that 80% of wireless data communications takes place indoors.<sup>1/</sup> For many younger adults, lower-income Americans, and minorities, cell phones are often a primary device for accessing online content.<sup>2/</sup>

Notwithstanding AT&T's efforts at the hearing to downplay the importance of low-band spectrum, AT&T itself has consistently recognized that this spectrum is critical to providing in-building coverage. For instance, Randall Stephenson, AT&T's Chairman and CEO, has characterized 700 MHz spectrum as “beachfront property” that “propagates like a bandit.”<sup>3/</sup> In explaining the difference between cellular and higher-band spectrum, AT&T's website says that cellular band spectrum at “850 MHz offers better in-building coverage because the signal can

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<sup>1/</sup> See Cisco, *Connected Life Market Watch*, at 28 (Aug. 2011), available at [http://www.cisco.com/web/about/ac79/docs/clmw/CLMW\\_Service\\_Delivery\\_US\\_Short.pdf](http://www.cisco.com/web/about/ac79/docs/clmw/CLMW_Service_Delivery_US_Short.pdf).

<sup>2/</sup> See Pew Research Center, *Cell Internet Use 2013*, at 2 (Sept. 16, 2013), available at [http://pewinternet.org/-/media//Files/Reports/2013/PIP\\_CellInternetUse2013.pdf](http://pewinternet.org/-/media//Files/Reports/2013/PIP_CellInternetUse2013.pdf).

<sup>3/</sup> See Craig Matsumoto, *AT&T Parties Like It's 1999*, HEAVY READING, available at [http://www.heavyreading.com/document.asp?doc\\_id=140162](http://www.heavyreading.com/document.asp?doc_id=140162); Transcript: AT&T's Randall Stephenson on the Network's Strength, CNN MONEY (July 18, 2012), available at <http://tech.fortune.com/2012/07/18/randall-stephenson-att/>.

better penetrate walls than signals at other frequencies.”<sup>4/</sup> AT&T public statements have also highlighted this benefit.<sup>5/</sup>

The Commission and the Department of Justice have also consistently recognized that spectrum below 1 GHz is more valuable than spectrum above 1 GHz because its more favorable propagation characteristics allow for better coverage inside buildings and across larger geographic areas.<sup>6/</sup> As a recent filing by the Competitive Carriers Association (“CCA”) showed, regulatory authorities in other nations have likewise noted that low-band spectrum is particularly important to promoting the cost-effective deployment of mobile broadband service in urban as well as rural areas because of its superior in-building and geographic coverage.<sup>7/</sup>

**3. In your testimony, you stated that Congress and the FCC have long recognized the importance of reasonable spectrum aggregation limits. In support of this statement, you referred to the auction statute of 1993 and the spectrum cap that the FCC imposed in the PCS auction shortly thereafter. Doesn’t the Public Safety and Spectrum Act from last year preserve the FCC’s authority to take similar actions with respect to the incentive auction?**

The Spectrum Act specifically preserves the FCC’s authority to “adopt and enforce rules of general applicability, including rules concerning spectrum aggregation that promote competition.”<sup>8/</sup> Band-specific spectrum limits would be well within this authority. Such limits would apply to all potential bidders in the auction, *i.e.*, no bidder could acquire in any market an amount of new spectrum over the specified limit.

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<sup>4/</sup> AT&T, “About Us, What You Need to Know About Your Network,” <http://www.att.com/gen/press-room?pid=14003>.

<sup>5/</sup> AT&T Press Release, *AT&T Offers Nation’s Fastest 3G Network* (July 10, 2008), available at <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=25921&mapcode=financial/mobile-devices> (“[T]he company is deploying additional 3G coverage using 850 megahertz (MHz) spectrum that is now available from the recent sunset of its older TDMA network. This spectrum extends farther and better covers the interior of buildings.”).

<sup>6/</sup> See, e.g., *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Sixteenth Report, 28 FCC Rcd 3700, ¶ 121 (“[I]t is well established that lower frequency bands possess certain more favorable spectrum propagation characteristics than spectrum in higher bands . . . . In particular, “low-band” spectrum can provide superior coverage . . . inside buildings and vehicles.”); *Ex Parte Submission of the United States Department of Justice*, WT Docket No. 12-269, at 13 (filed April 11, 2013) (“In particular, the propagation characteristics of low-frequency spectrum permit better coverage in both rural areas and building interiors.”).

<sup>7/</sup> See Letter from Rebecca Murphy Thompson, General Counsel, Competitive Carriers Association, to Ms. Marlene H. Dortch, Secretary, FCC, WT Docket No. 12-269 and GN Docket No. 12-268 (filed Sept. 4, 2013). T-Mobile is a member of CCA.

<sup>8/</sup> 47 U.S.C. § 309(j)(17).

While the impact of spectrum limits on a particular entity will depend on the entity's existing spectrum holdings, it is well established that a rule is of general applicability even if its effect is limited to only a subset of entities within an industry sector. Indeed, courts have affirmed that a rule of general applicability is one that has "a direct and significant impact upon the substantive rights of the general public or a segment thereof."<sup>9/</sup> As long as the rule is based on a "genuine classification," such as, for instance, the amount of band-specific spectrum a carrier could hold, the rule would be considered a rule of general applicability even if it affected only a few parties.<sup>10/</sup> A rule need not have "industry-wide" effect in order to be considered generally applicable.

Finally, it is worth noting that the Spectrum Act did not alter the statutory directive to the Commission to design auctions to promote the deployment of new products and services, economic opportunity, competition, and the dissemination of licenses "among a wide variety of applicants."<sup>11/</sup> Reasonable spectrum limits would promote these goals by ensuring that all carriers to have a meaningful opportunity to participate in future auctions.

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<sup>9/</sup> *Lewis v. Weinberger*, 415 F. Supp. 652, 659 (D.N.M. 1976) (*emphasis added*); see also *Aiken v. Miller*, 442 F. Supp. 628, 653-54 (E.D. Cal. 1977) ("A substantive rule of general applicability . . . is a substantive rule which changes existing practice and has a substantial impact on a segment of those regulated.").

<sup>10/</sup> See *Am. Airlines v. Civil Aeronautics Bd.*, 359 F.2d 624, 631 (D.C. Cir. 1966) (finding that rules based on a "genuine classification" are permissible as generally applicable rules even if they have the effect of treating different classes of competitors within an industry differently, as long as the "classes . . . [are] analyzed both functionally and in terms of capacity for furthering the promotional purposes of the [statute]" and the rule is not "individual in impact and condemnatory in purpose").

<sup>11/</sup> 47 U.S.C. § 309(j)(3)(A)-(B).

**BRIEF HISTORY OF AT&T'S CELLULAR SPECTRUM HOLDINGS**

**1981:** The FCC allocates one of two 20 MHz blocks of 800 MHz cellular frequencies to local telephone companies, who receive licenses for free. That includes AT&T, through its ownership of the Bell Operating Companies. The other 20 MHz block (the “non-wireline” block) is made available to other entities, who must compete for it through comparative hearings.

**1982:** Congress passes a law authorizing the FCC to use lotteries to award non-wireline cellular licenses.

**1984:** At the breakup of AT&T, the cellular frequencies issued to AT&T are passed to the divested Regional Bell Operating Companies (“RBOCs”). The RBOCs include Southwestern Bell, Pacific Telesis, Ameritech, and Bell South.

**1986:** The FCC allocates an addition 5 MHz to each cellular licensee, again for free.

**1986:** The Commission allows Pacific Telesis to buy the non-wireline cellular license outside its local telephone area. This sparks a wave of acquisitions of non-wireline systems by other Baby Bells. The Justice Department, the FCC, and the courts agree that such acquisitions are allowed by the terms of the Bell System breakup.

**1987:** Southwestern Bell, the predecessor of today's AT&T, purchases Metromedia's non-wireline and paging licenses for \$1.65 billion.

**1994:** AT&T Corp., the long-distance predecessor of the current AT&T, acquires McCaw Cellular for \$11.5 billion. McCaw's owner, Craig McCaw, bought the cellular rights of non-wireline lottery winners across the country and combined them with the cellular rights he acquired in the initial lottery of cellular licenses. The company is renamed AT&T Wireless.

**1995:** Southwestern Bell changes its name to SBC Communications Inc.

**1997:** SBC Communications Inc. merges with Pacific Telesis.

**1999:** SBC Communications Inc. acquires Ameritech.

**2004:** Cingular Wireless – which was jointly created and owned by SBC Communications Inc. and BellSouth Corp. – purchases AT&T Wireless for \$41 billion, creating the country's largest mobile phone provider.

**2005:** SBC Communications purchases AT&T Corp. in a \$16 billion transaction. The company becomes AT&T, Inc.

**2006:** AT&T Inc. and BellSouth Corp. merge, thereby consolidating ownership of Cingular Wireless under one brand, AT&T.

